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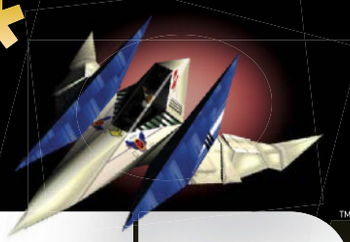

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64 REASONS WHY THE CLASSIC CONSOLE IS ONE TO TREASURE

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BUTTING HEADS WITH HUDSON'S MEAT-EATING MASCOT

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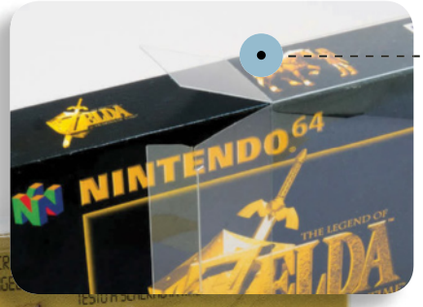

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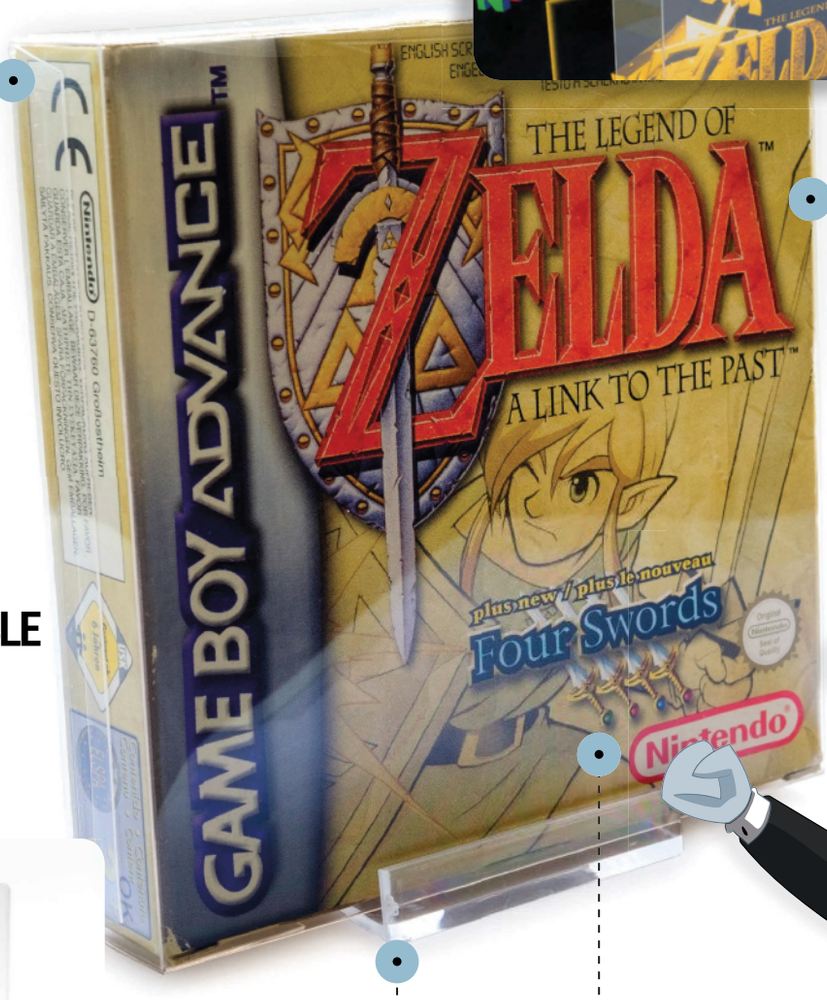

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THE RETROBATES

FAVOURITE N64 GAME

DARRAN JONES

It's clearly *Sin & Punishment*. An astonishing game by Treasure that continually pushes Nintendo's console to its limits.

Expertise:
Juggling a gorgeous wife, two beautiful girls and an award-winning magazine

Currently playing:
Lego Star Wars: The Force Awakens

Favourite game of all time:
Strider

NICK THORPE

It's got to be *F-Zero X* for me. Who needs pretty backgrounds when you've got insanely fast vehicles, four-player racing and smooth frame-rates?

Expertise:
Owning five Master Systems (I sold two)

Currently playing:
Guilty Gear Xrd -Revelator-

Favourite game of all time:
Sonic The Hedgehog

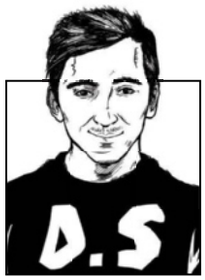
LUKE ALBIGÉS

F-Zero X and *Pokémon Snap*. I will not be forced into deciding between these glorious things.

Expertise:
Unstoppable *Bomberman* player and real-life Guitar Hero

Currently playing:
Monster Hunter Generations

Favourite game of all time:
Micro Machines 2: Turbo Tournament



DREW SLEEP

I grew up on *Pokémon Red*, trying to make sense of those 2D sprites forever, so imagine how far my jaw dropped when I saw *Pokémon Stadium*.

Expertise:
Looking misty-eyed at Glastonbury footage on deadline day

Currently playing:
Kingdom Hearts II.5 HD Remix

Favourite game of all time:
Rocket Knight Adventures

SAM RIBBITS

There's no denying that Super *Smash Bros.* is a hell of a lot of fun! Really sums up the N64's multiplayer ethos.

Expertise:
Pixels

Currently playing:
Super Mario Advance 3: Yoshi's Island

Favourite game of all time:
Portal 2

PAUL DRURY

Though I've given *GoldenEye*'s multiplayer the most play, I have great affection for *Pilotwings 64*, the first N64 title I owned and a gentle masterpiece.

Expertise:
C64 User Manual

Currently playing:
Battleborn

Favourite game of all time:
Sheep In Space

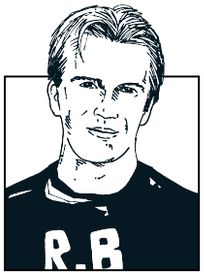
GRAEME MASON

Excitebike 64. Not a racing fan but always loved this series.

Expertise:
Adjusting the tape azimuth with a screwdriver

Currently playing:
Singularity

Favourite game of all time:
Resident Evil 4



RICHARD BURTON

Space Station Silicon Valley. Humorous and inventive on many levels, this puzzle solving platformer knits together its diverse quirky elements into a really playable game.

Expertise:
Time travel

Currently playing:
Master Of The Lamps

Favourite game of all time:
Manic Miner

PAUL DAVIES

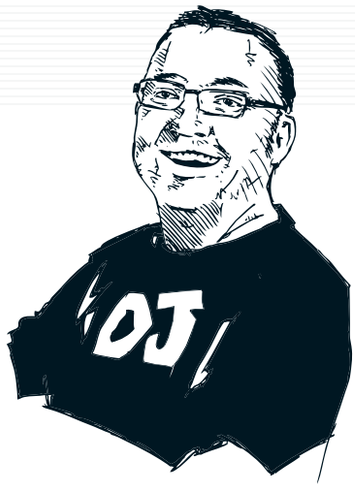
Boring answer, but it has to be *Mario 64*. It was magical. I haven't felt the same way since about any other game (or 'experience' if you're Microsoft).

Expertise:
Writing much better in my sleep

Currently playing:
Overwatch

Favourite game of all time:
Ghouls 'N Ghosts

LOADING...



If there's one thing I've learned in all my years as a gamer it's never bet against Nintendo. The company is one of the few big players in the industry that still follows its own rules, rarely following popular trends, to doggedly do its own thing – even if that looks to be to the company's detriment.

For all the speculation surrounding the NX, I'm still excited about it. Why wouldn't I be? I love great games and Nintendo knows how to make incredible games. Granted, the Wii U hasn't done as well as expected, but it still has plenty of killer games.

So why am I talking about new consoles in a retro gaming mag? Simple, I see a lot of similarities between the Wii U and N64. Both have a library of games that are some of the finest of their genres, focused on local multiplayer and both sold poorly compared to their predecessors. The N64 may not have won the war against PlayStation, but it remains a wonderful system. In fact, we have 64 reasons why it deserves to sit proudly in your games room – covering everything from the hardware itself to its many fantastic games.

The N64 may have only just turned 20, but its effect and contributions to gaming can't be underestimated. Don't believe me? Then listen to the experts we've spoke to whose games entertained a generation of gamers.

Enjoy the magazine!

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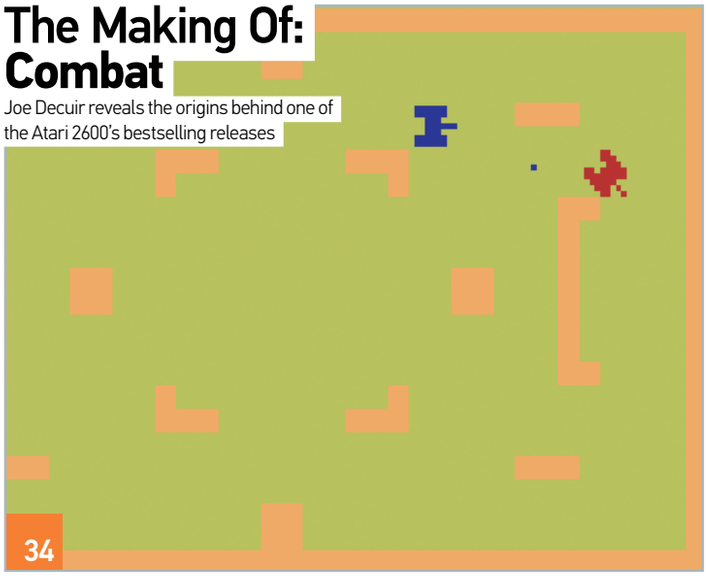

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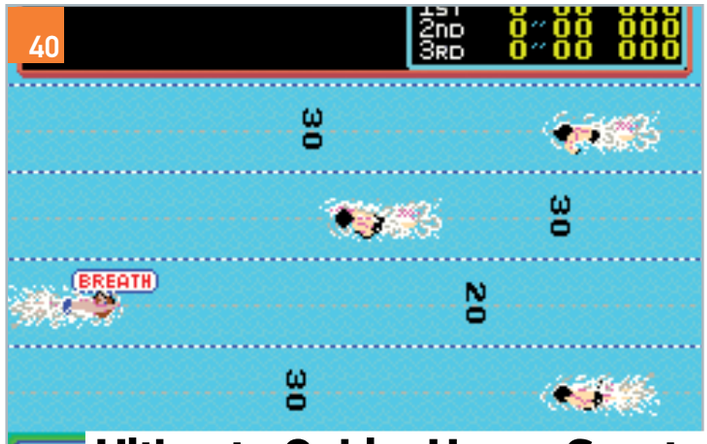
64 Reasons To Celebrate The N64

As Nintendo's 64-bit console celebrates its 20th anniversary we interview the developers who helped make the console sing



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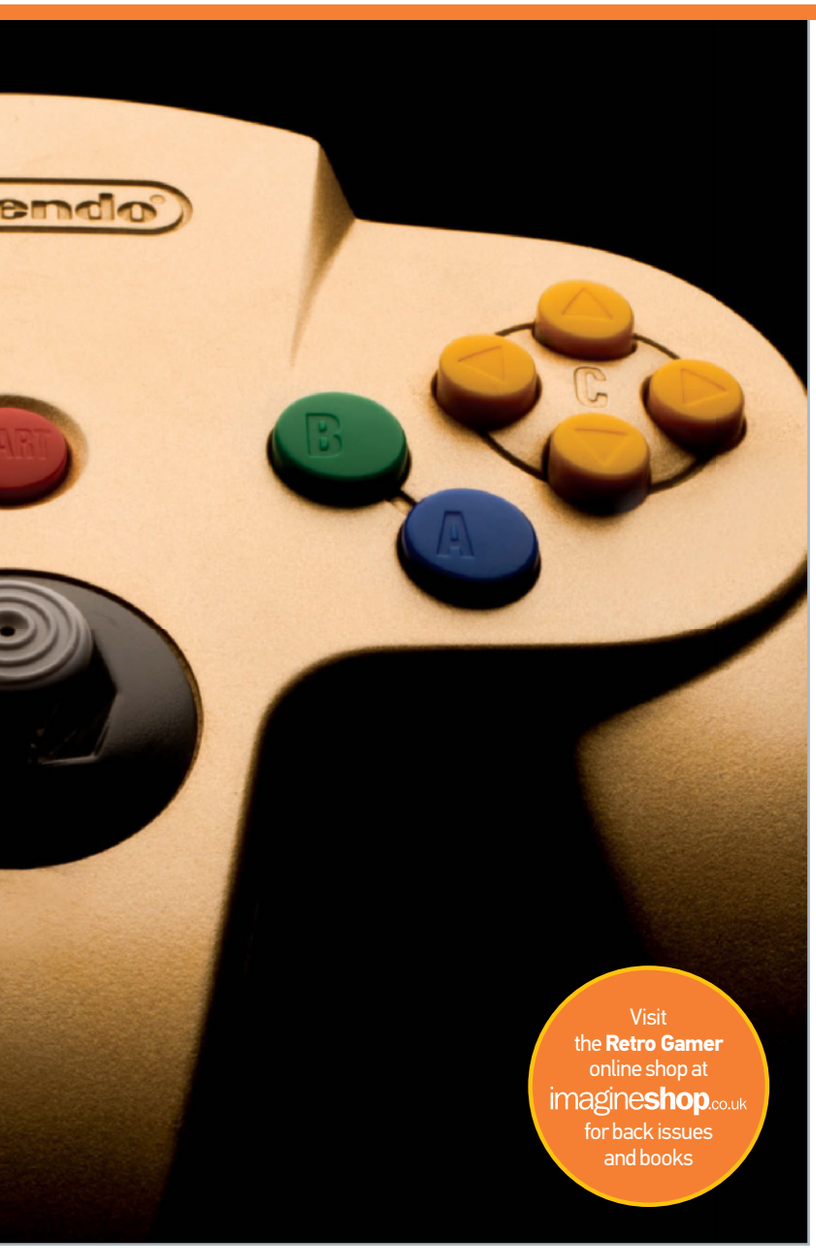

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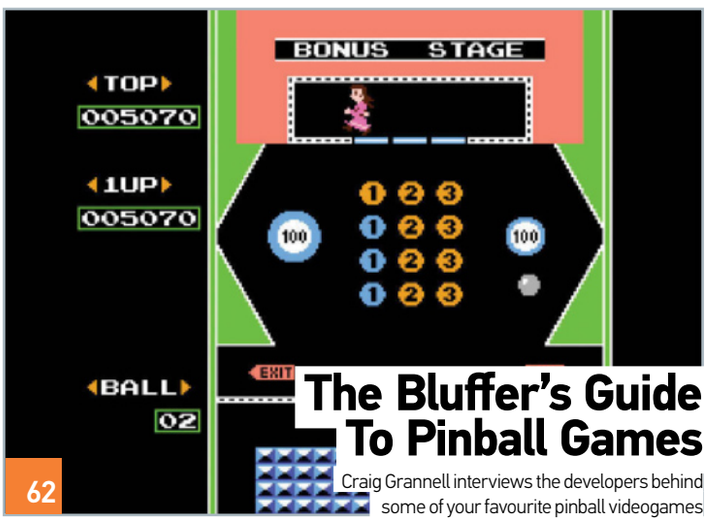

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> "Converting the graphics was challenging but I was very happy to put the time in"

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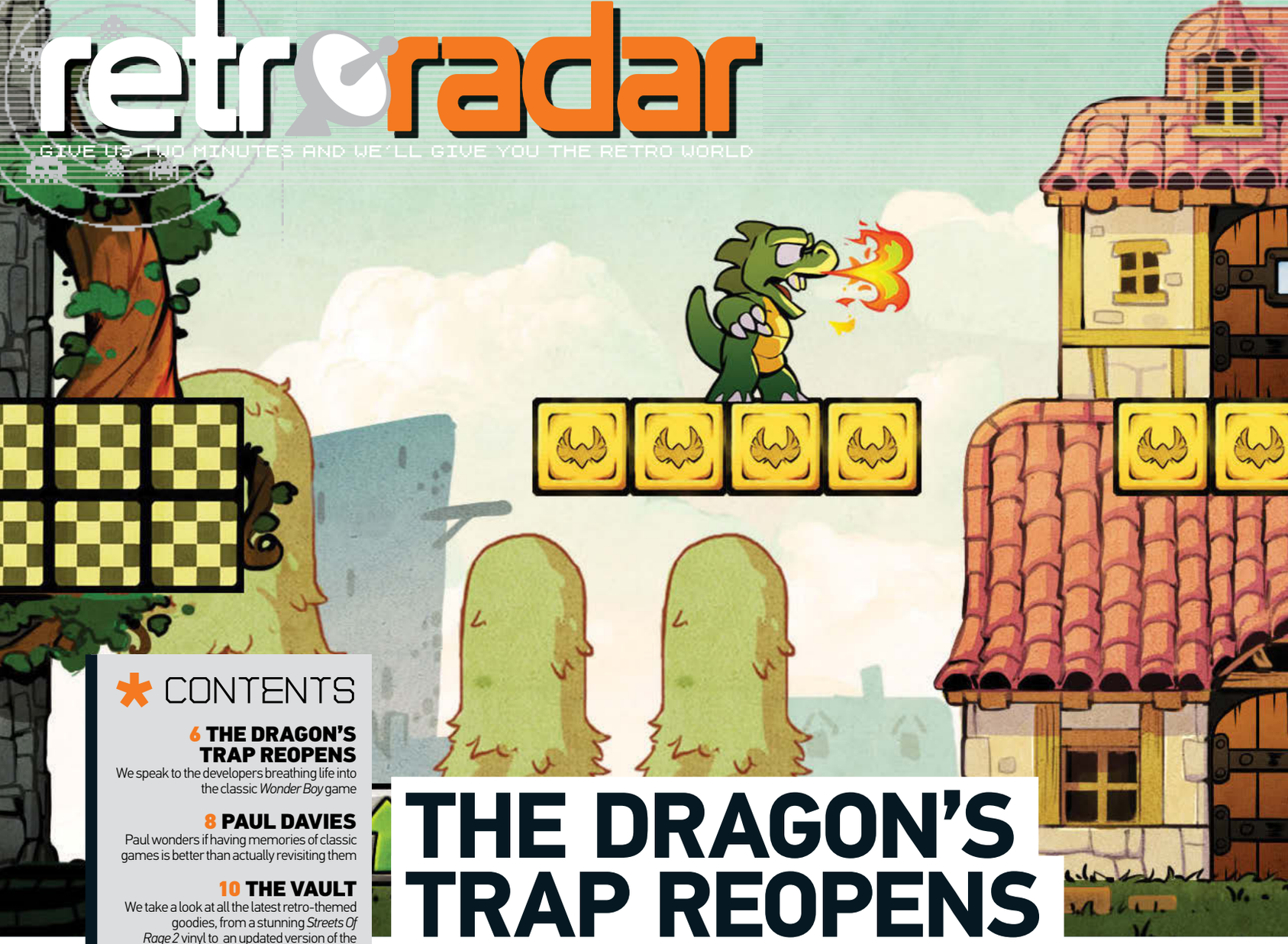

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Paul wonders if having memories of classic games is better than actually revisiting them

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We speak to the man who is planning to bring classic retro games to the masses

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Richard Burton is making yet another important stop in the Nineties. This time he's visiting August 1999

THE DRAGON'S TRAP REOPENS

We interview the developers bringing the best Wonder Boy game back to life

It appears there's never been a better time to be a fan of the classic *Wonder Boy* series. In addition to *Monster Boy And The Cursed Kingdom*, which is an obvious tribute to *Wonder Boy III: The Dragon's Trap*, DotEmu has just announced a HD update of *The Dragon's Trap* too, and it looks incredible. Wanting to find out more, we spoke to Cyrille Imbert (DotEmu's CEO) Lizardcube coder Omar Cornut and Lizardcube artist, Ben Fiquet to find out more.

Why choose to remake *Wonder Boy III* over the original?
Omar Cornut: Because we chose to make the one that we loved most! In fact, for me it was between *Monster Land* and *Dragon's Trap*. Eventually we thought *Wonder Boy III: The Dragon's Trap* had most variety and would provide a challenge to make. We are also aware it is a cult game that has an enormous following, and are treating it as such.
Ben Fiquet: The world of *The Dragon's Trap* is also full of energy, charm and filled with characters that are such a pleasure to draw and also to play with.

Have you been surprised by the reception you've received so far?
Cyrille Imbert: When Ben and Omar came to us with their project, I instantly felt that we had something special. Finally, when we launched the countdown for reveal we knew that it was real and the reception of the trailer confirmed it. However, when you've launched many games, you know the real meaning of disappointment so you try to not get carried away by excitement... So it was not 100 per cent surprising but 100 per cent satisfying!
BF: It's been an incredible heartwarming welcome for both the project and us.

READER'S WEIGH IN — Will you buy The Dragon's Trap HD?

I love the original and I am really looking forward to this, it would be perfect on the 3DS so I am hoping it is released on that.
Big Shoes

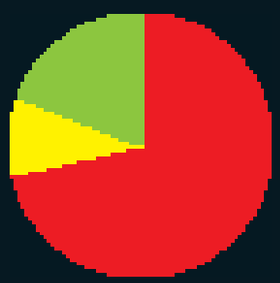
Looks absolutely wonderful. I really hope it gets a full physical release.
JamesC

I actually wish they remastered the first *Wonder Boy*. It was a tad simplistic in gameplay, sure, but absolutely prime for a new version I reckon.. I don't like all that RPG nonsense they implemented in the subsequent editions. It ruined a good game!
ncf1

I don't like the cartoony art style that was shown in the trailer. I get that the kids market in gaming is huge, but just like I prefer Eighties fantasy/action/sci-fi cartoons to the current ones, same with games.
MediaCult

The remake looks great, but does not really look like a *Wonder Boy* game.
RodimusPrime

Looks different enough to make it worth doing. Will I buy it? Probably not.
paranoid marvin



» [Master System] We wonder if the original cheat to unlock everything will be included. It's WE5T0NE if you're interested.

» The stupendously good animation is impossible to see here. Trust us, it looks absolutely amazing.

"He sent me the source code, all in assembly with comments in Japanese"

Omar Cornut

People seem to be enjoying the direction we went for and we couldn't be happier.

What help are you receiving from Ryuichi Nishizawa?
OC: He is the guardian of the temple! While he is leaving us to make our own choices as per the direction of the new *Wonder Boy III*, we send him our work pretty often and he gives us feedback. As we are aiming very hard at making this new version play and "feel" like the original, it isn't inaccurate to say that it is Westone's game above being our game. Initially I spent many months reverse engineering the original game code to understand it perfectly, but after we pitched this to Mr Nishizawa and he realised we were serious he sent me the source code, all in Z80 assembly with comments in Japanese. It is magical that in this day and age we can accomplish so much cooperation over the internet.

What will you be doing to ensure your game stands apart from the very similar *Monster Boy*?
OC: We both had a project in mind and each of us is focusing on making the best game we can, with our own style and sensibilities. So we're not thinking, 'How should we make it different from *Monster Boy*?' It would be frustrating for both of us if we did so, because each game has its own set of qualities. We're hoping fans will play both games.
CI: I think Lizardcube and Game Atelier work are very different in many ways. Both studios are huge fans of the licence, with their own visions and ideas, and this is even better for the *Wonder Boy* fans in general!

Does this mean you have the *Wonder Boy* licence?
CI: We can't get into details but, yes, we do have the authorisation of using the *Wonder Boy* licence. For now nothing is decided on what will be next, and we are focusing on the current project.
OC: We are permitted to officially create this remake and use the name. The licence itself is still in Japan so if we wanted to make, say, a sequel, we would still need permission.

Is this based on the Master System version of the PC Engine version?
OC: We use the Master System version as our reference point, as it is the one that Westone first made and the one that most people played. We are however incorporating improvements from both the PC Engine and the Game Gear version. For example, the Game Gear version changed the charm stone system and we are looking into changing it as well, in a totally new way.

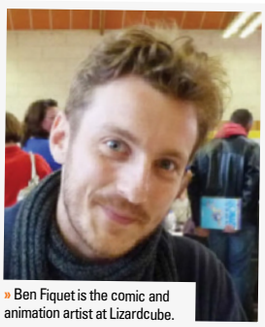
The style is excellent, was it hard to capture the feel of the original?
BF: Thanks. It took me quite some time to find the appropriate style that would befit the project. It can be difficult to pinpoint what the original team would have gone for if it weren't for the technical limitations of the time. I tried to focus on 'upgrading' the original to what I consider in my opinion, would be the truest to the original art. But there's obviously a lot of interpretation when I have to fill a plain black background, you have to consistently make choices with your own sensibility. I also put a lot of time into animation, which is created frame by frame. It's something that I really miss from the old days with games like *Aladdin* (on Mega Drive) or *Earthworm Jim* that were animated that way. It really makes the characters more alive and I think people tend to feel that the game will be more vibrant with it.

Will this new version of *Wonder Boy III* feature any new mechanics?
CI: We are still in the early development phase. Lizardcube have many great ideas and we need to figure out which are the best ones for the project to please the fans and newcomers all together. We will have plenty of cool stuff to reveal so stay tuned! *

THAT OTHER WONDER BOY GAME...

Whatever happened to the Wizard Of Booze?

The HD update of Wonder Boy III: The Dragon's Trap isn't the only Wonder Boy-styled game we can expect. Wonder Boy's creator, Ryuichi Nishizawa, has also teamed up with Game Atelier to create Monster Boy And The Cursed Kingdom. Like The Dragon's Trap, it features a boy who can transform into various animals, each of which has their own unique powers. The revealed animals so far, do appear to be straightforward adaptations of the originals (the snake can stick to walls like Mouseman for example) but we're confident that more will be done to make them stand apart from the original characters. It's unclear when Monster Boy will be released, but its lengthy development suggests it will be out first. Either way, there's never been a better time to be a fan of the series.



» Ben Fiquet is the comic and animation artist at Lizardcube.

» Cyrille Imbert is DotEmu's CEO. His company specialises in retro classics.

» Omar Cornut is a coder/developer at Lizardcube and loves *Wonder Boy*.

Here's my bio... Paul Davies
In 1992 I started out on *Mean Machines Sega* and *Nintendo Magazine System*. In 1995 I became editor of *C&VG*. I led the *C&VG* website from 1998 until Christmas 2000, then I left journalism to be concept design manager at Criterion Games. I returned to journalism in 2002 and from 2005 I've been running my own company, Unlikely Hero.

Condition: Like New

I'm probably about to cause damage to my retro credentials with this. However, somebody recently asked a specific question to which I can only provide an honest answer.

"Do you still play retro games?" a new friend on Twitter put to me the other week. Their profile read that they are a fan of retro games, and their feed wonderfully backed this up. Rather than engage in a conversation that I knew would lead to specifics, I basically owned up to the fact that I don't. And the reason is because I have already played them. A lot. Only, I played them at the time – when they were new; when they were the most amazing things.

That's the bombshell, I guess. I actively avoid revisiting *Axelay, Ghouls 'N Ghosts, Asteroids, Frak!, Panzer Dragoon, NiGHTS*... you name it, partly because I am now sinking all my time into the games I enjoy right now, but in no small way because I treasure my memories too.

In my head, I can clearly revisit my school's open day where Commodore PETs – arranged on classroom desks hauled into the entrance hall – ran their blocky rendition of *Space Invaders*. I can be standing before *Phoenix* at a scruffy arcade in my hometown, yelling at my friend to use the shield, 'USE THE SHIELD!' I'm wandering out of the ABC Cinema theatre to find *Moon Cresta* in the corridor, to my surprise, noticing how the screen is so bright with vivid colours.

I am still in the thrall of these 'retro' games, because to me they are still current, found where I left them in time. There's nothing more to take in; nothing more I could learn. Meaning that, yes, though Darran is paying me to hold this conversation with you each issue, the many comments that I make are drawn from a part of me that is preserved.

It's one privilege of being old, I suppose. Sure I have aching knees, sagging cheeks (front and rear), a bit of a belly and a beard that makes me look like a badger. But, I also lived through one of the most exciting times in all of technology, art and entertainment combined, with a series of clear 'Before' and 'Afters' for context. I don't pretend to know everything, I indulged in a finite number of things over the years. I will, however, defend my genuine passion for every single computer and videogame that my hand-eye coordination had to contend with.

I'll give you the fire in *Golden Axe* as a quaint example of how realistic I believed this looked (to me, anyway) back in 1989. I'll join in the teary-eyed reminiscing over Cloud and Aerith, something that (for me) was exquisite in presentation, carrying the moment before our hero has to let go. Sometimes, depending on who I'm with, and they get something wrong I'll laugh robotically and call them a Space Ca-det. *Gorf*, with its flashing joystick and digitised speech is brilliant.

If ever I go back to analyse all this stuff, put my fingers on old plastic and peer into screens that look like goldfish bowls, I feel like the spells are being sucked out of me. So, if you'll forgive me, I'd prefer to carry on as I am. As I was. *

What do you think?

Do you agree with Paul's thoughts? Contact us at:

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the vault

THE COOL RETRO STUFF THAT WE'VE HAD OUR EYE ON THIS MONTH

Streets Of Rage II LP

Collecting all the best tracks from the classic brawler on two 180g vinyl discs, Data Discs' fifth and latest release is arguably its best yet. Yuzo Koshiro's audio masterpiece sounds as good today as it did back in 1992 and the package itself is beautiful – the gatefold sleeve lets the game's distinctive art do the talking and there's the option of black, transparent smoke effect or blood splatter effect vinyl.

Price: £22.99
From: data-discs.com

Commodore 64: A Visual Compendium

The original version of this elegantly-presented love letter to the popular computer was pretty sleek, but this second edition has even more to offer C64 fans and retro enthusiasts alike. With over twice as many pages (a whopping 476 in total), it's a fantastic celebration of not just the hardware and the games, but the people and media of the time – crisp full-bleed screenshots are almost always accompanied by developer input and anecdotes, classic artwork is reproduced in all its glory.

In addition to single and double-page articles, the book is peppered with slightly longer pieces that offer a great insight into the Eighties development scene. If you have even the slightest bit of love for the C64, this deserves to take pride of place on your coffee table… next to the latest issue of **Retro Gamer**, of course.

Price: £29.99 **From:** bitmapbooks.co.uk

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Price: From £1.39 **From:** shark-protectors.com

Gaming Travel Notebook Collection

A set of three different game-themed A5 notebooks, with three different designs – a busy design covered in stickers and stamps that reference everything from Hyrule to Rapture, a simple 8-bit menu-themed one and cool artsy one featuring a skull made out of gaming paraphernalia. They're made of 100 per cent recycled paper, too, so the planet won't hate you while you jot down passwords and sketch out maps.

Price: £9.99 **From:** gametee.co.uk

8Bitdo Retro Receiver

Don't assume that you can't have modern luxuries on old consoles – thanks to 8Bitdo's latest innovation, it's possible to use a selection of wireless controllers (including 8Bitdo's own range of pads, as well as PS3, PS4, Wii and Wii U Pro Controllers) on the NES! Depending on your controller, the syncing process can be a little awkward but the website has a useful per-pad guide on how to play NES games without having to get attached.

Price: £17.99 **From:** funstockretro.co.uk

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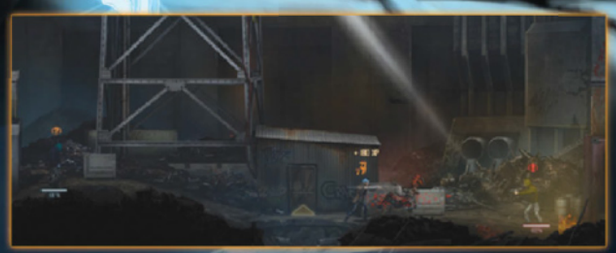

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a moment with...

Joypad Arcade

John Swain explains how retro gaming has become a little more portable

Why did you decide to launch Joypad Arcade?
At Joypad we'd been running pop-up parties and gaming warehouse raves for a few years – all the while amassing an enormous library of mint-condition original consoles, CRT televisions, peripherals and games. It seemed selfish to keep all of that legendary gaming history under lock and key when it wasn't being used! Eventually that idea evolved into a new arm of the company and Joypad Arcade was born. Totally portable, massively customisable, and the largest hireable collection of immaculately-kept Golden Age gaming equipment in the UK – Joypad Arcade is something we're proud of!

Tell us about your JoyPods and MultiPods...
In our humble opinion our JoyPods or MultiPods are the optimal way to celebrate the form and function of these awesome machines whilst giving them a pedestal on which to be admired! These two types of pod are both designed with different events in mind, each securely house your chosen consoles and keep them cool and safe. Full details are on our website.

» Every single PAL N64 game is available, even the really rubbish ones like *Superman 64*.

What systems prove to be the most popular?
It depends entirely on the audience! We're constantly gobsmacked by the breadth of appeal in retro gaming. From the seasoned veteran, all the way down to a generation that is far too young to have grown up with anything classifiable as 'retro'. Within that spectrum you have the 'Nostalgia Hunters' who want to recapture the halcyon days of sitting cross-legged in front of the living room TV, the 'Collectors' keen to play through our rarities and imports, and the 'Thrill Seekers' keen to throw themselves into a great game that they have never played before!

That said, the N64 is probably the console we get the most requests for, and we have every PAL game ever released for the system!

What's the Gaming Bible?
The Gaming Bible is our mighty tome detailing every single game in our 1,000+ library. In the olden days it would take several people just to open the front cover and you'd be blinded by billowing dust with every page turn... but fortunately we live in the digital age and you can browse the whole thing on our website.

» Joypad Arcade caters to both the young and old, meaning everyone gets to have fun.

> **"We'll be bringing Joypad Arcade to several birthday parties, office parties, a festival and even a wedding"**
> John Swain

Do you cater for small events like birthday parties?
We certainly do, this month alone we'll be bringing Joypad Arcade to several birthday parties, office parties, a festival and even a wedding!

Why do you think console game hire is so popular?
We know that people love retro games and consoles but not everyone has the space, time or money to collect dozens of consoles and hundreds of games. Also, the way in which people consume games is constantly changing, people are becoming accustomed to having a game on the go pretty much anywhere they are, and socialising around games is something a whole generation of gamers has grown up with.

» In addition to the obvious games, Joypad Arcade also has rarities, such as *Radiant Silvergun*.

What extras do you offer over your competitors?
We've been throwing retro gaming parties for almost three years and are yet to meet anyone as dedicated and passionate about classic consoles, their games and cultural impact as ourselves. We are not only avid collectors, but enthusiastic fanboys for the actual act of playing games in all of their forms. Our set-up process is 100 per cent hands-off for our clients, we set everything up, change games, swap controllers and peripherals – we just go the extra mile to provide a service you can't get anywhere else.

Classic consoles are precious pieces of design and history – worthy of being placed on a pedestal. Classic consoles are there to be played and often the only medium on which you can truly experience some of the best games ever made. Joypad is the only place where these two ideologies meet, have a few beers, and truly get along!

Head on over to joypadbar.co.uk for more information.

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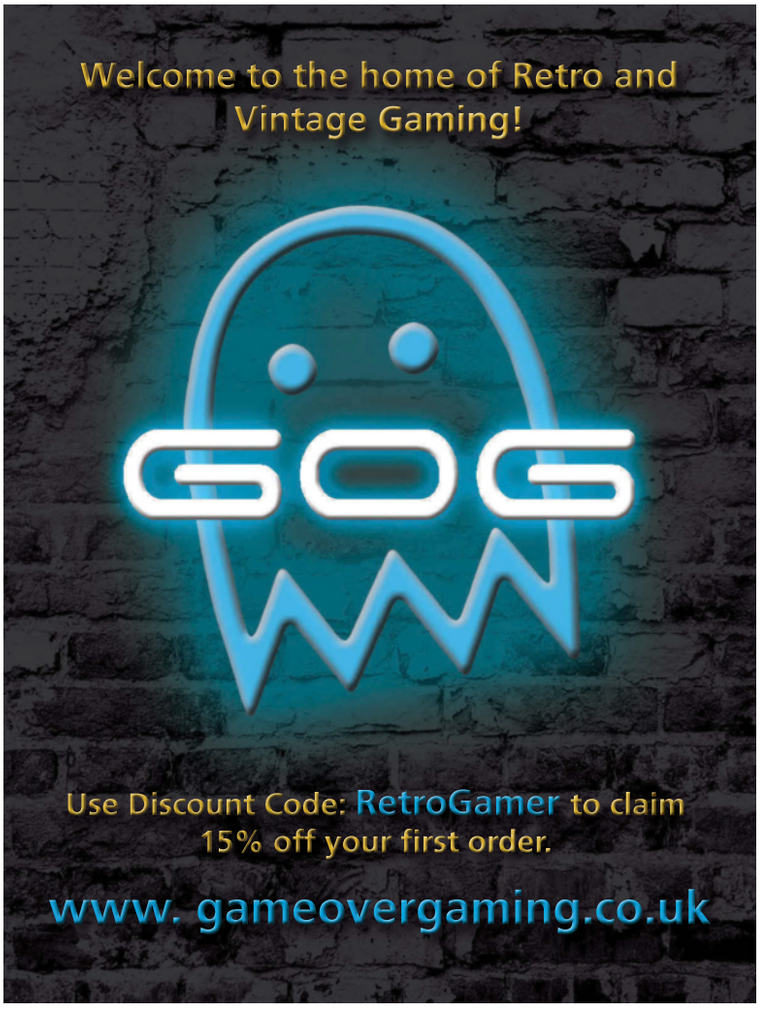
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BACK TO THE NINETIES

[PC] *Command & Conquer: Tiberian Sun* proved hot for Electronic Arts becoming its fastest-selling game up to 1999.

THE LATEST NEWS FROM AUGUST 1999

AUGUST 1999 – Midway throws down the Gauntlet, Power Shovel unearths itself, Command & Conquer is Kaned again, Tony Hawk ollies in, Mario Bros. is back and Silent Hill gives you the willies. Richard Burton emerges from the fog…

There was a new look for an old favourite with Midway Games' *Gauntlet Legends* on the Nintendo 64. The feel of the classic dungeon crawler was kept similar to the original but crisp isometric graphics were also thrown in. The quest through each level remained the same: destroying enemies, finding treasure and potions, but additional features, such as character advancement through level progression, were welcome improvements.

Tricky bosses were introduced at the end of each of the four kingdoms, with a key rewarded to the player for each defeated boss, allowing access to the final temple. While the single-player action was adequate, *Gauntlet Legends* came into its own when played as a multiplayer co-operative game. It was a well-balanced console game with a healthy retro gaming pedigree underpinning it.

Oddest release this month was the Japanese arcade coin-op, *Power Shovel Simulator.* The game tested your driving and bucket handling skills as you progress through a variety of tasks. *Power Shovel Simulator* was a bizarre, yet enjoyable, game with tasks ranging from the typical to downright bonkers and all against the clock. These included destroying cars, dumptruck-filling, high-rise pathway driving, shed demolition, hole-digging and rescuing turtles from a swimming pool.

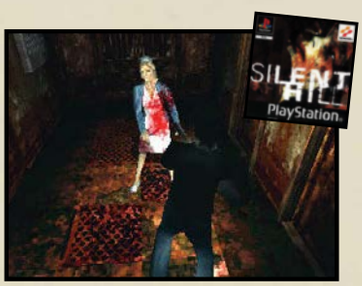
Command & Conquer: Tiberian Sun for PC arrived this month after a lengthy four-year development period. The ongoing battles between Kane, leader of The Brotherhood Of Nod, and the Global Defense Initiative, continued but felt hackneyed. EA had acquired Westwood Studios in 1998 and brought forward *Tiberian Sun*'s release date, leading to several features being omitted. This may have led to Tiberian Sun not being quite what Westwood originally envisioned. However, it became Electronic Arts' fastest-selling game, at the time, selling 1,500,000 units in its first month. Assorted expansion packs naturally followed…

Whether you're adept at kickflips, a switchfoot pogo or the more common smashing your teeth on the pavement, the release of *Tony Hawk's Skateboarding* on the PlayStation would give you the chance to sharpen your deck skills without excessive dentistry costs. You control Tony Hawk around a 3D environment stuffed full of rails, jumps and obstacles for you to perform your moves and tricks on. There are timed competitions in which you try to amass points by pulling off insane manoeuvres and there's also an objective mode where you must complete set tasks to be rewarded with a videotape. Collect enough of these to unlock hidden features and levels.

Everyone agreed that the realism of the moves, the excellent graphics, the skateboarding mechanics and the physics were all spot-on, so it came as no surprise to hear that Tony Hawk was heavily involved with the games development.

Published by Eidos for PlayStation was the second in the *Soul Reaver* series, *The Legacy Of Kain.* It was a third-person perspective action adventure game with puzzles to solve and hack-and-slash combat elements.

[N64] *Gauntlet* returns in this splendid isometric incarnation of the old-school original.



[PlayStation] Prepare to have your nerves shredded, and your spine tingled. Welcome to Silent Hill.

THIS MONTH IN...

AMIGA FORMAT

Issue 126 saw *Amiga Format* celebrating its tenth birthday. A large slice of the birthday issue was put aside for a feature looking back at previous issues, editors, staff writers and several top-ten lists. Ironically just ten issues later the self-proclaimed "World's Bestselling Amiga Magazine" mourned its final issue.

NINTENDO WORLD

The Nintendo mag highlighted its exclusive and extensive *Donkey Kong 64* preview. It said the Expansion Pak would be included because the game was too big for the N64's memory. It was later revealed the game contained an unidentified bug and would only work with a Pak attached. It cost Rare a fortune.

NEXT GENERATION

Another magazine with an 'exclusive' *Donkey 64* preview was *Next Generation* which boosted the section with two Rare N64 previews, the first-person shooter *Perfect Dark* and third-person shooter *Jet Force Gemini*. The future looked exceptionally rosy for Rare, Nintendo and N64 gamers alike.

You play Ralziel, a vampire killed by Kain in the original game but resurrected by The Elder God. Ralziel has vengeance in mind and a need to revive the decaying world of Nosgoth.

To progress, Ralziel must master shifting between the spectral plane and the material world with many puzzles straddling the two with object manipulation between planes key to your success. *Legacy Of Kain: Soul Reaver* was well received with its finely-honed graphics and immersive gameplay, and was further enhanced by its rich Gothic atmosphere.

An old retro gaming favourite made a belated appearance in Europe on the Game Boy Color during August. Nintendo's *Super Mario Bros. Deluxe* was a remake of the 1985 NES classic but with additions such as a challenge mode and *The Lost Levels* hidden as an unlockable reward. It was simply portable playing perfection.

At the other end of the spectrum was *720°*, the skateboarding game from Atari. While the arcade original from 1986 was innovative and fun, the Game Boy Color port was excruciating, with flabby controls and disappointing graphics making persevering with the game futile and pointless.

Konami introduced PlayStation gamers to *Silent Hill* this month. You played Harry Mason looking for his lost daughter in the horror-filled town. Inhabited by all manner of monstrosities, you must locate and save her from the cult that dwells in the town. The third-person survival horror game ticked all the right boxes with a permanent air of impending doom in the eerie fog-clad town that suffers frequent unseasonal snowfall. Where previous horror games had relied on copious splurts of blood and snot, *Silent Hill* targeted your nerves putting you in a state of psychological trauma throughout. Dark, foreboding graphics, brilliant character design and a superb soundtrack all added to the disturbing edgy feel of the game.

Scary for different reasons was the release of *Jet Moto 3* exclusively on the PlayStation. You ride a futuristic hoverbike that skims across both land and water. It has 19 courses including new stunt tracks and ten different riders to choose from. *Jet Moto 3* also saw the introduction of weather to alter course dynamics.

This third game in the series was the worst with ropey controls, unimaginative course layouts and gameplay that could see you win a race almost with trying. Further games were planned but poor sales of *Jet Moto 3* saw them cancelled. *Jet Moto* had run its course. ✱

[PlayStation] *Tony Hawk's Skateboarding* catered to all... and it's ace.

[Game Boy Color] Take a classic game, squeeze it into a handheld, and you have platform perfection on the go.

CHARTS

AUGUST 1999

NINTENDO 64

1. Star Wars: Episode I Racer (Nintendo)
2. Quake II (Activision)
3. F-1 World Grand Prix II (Video System)
4. Star Wars: Rogue Squadron (Nintendo)
5. Ocarina Of Time (Nintendo)

PLAYSTATION

1. Civilization 2 (Activision)
2. FIFA 99 (Electronic Arts)
3. UEFA Championship Manager (Eidos)
4. Metal Gear Solid (Konami)
5. Rugrats: Studio Tour (THQ)

GAME BOY COLOUR

1. The Rugrats Movie (THQ)
2. FIFA 2000 (Electronic Arts)
3. The Legend Of Zelda DX (Nintendo)
4. Wario Land 2 (Nintendo)
5. WWF Attitude (Acclaim)

MUSIC

1. When You Say Nothing At All (Ronan Keating)
2. Better Off Alone (DJ Jurgen presents Alice Deejay)
3. Livin' La Vida Loca (Ricky Martin)
4. If I Let You Go (Westlife)
5. Mi Chico Latino (Geri Halliwell)

NEWS AUGUST 1999

11 August saw a total solar eclipse in the UK, the first since 1927, with Cornwall and South Devon witnessing the totality of a full solar eclipse. First landfall of the lunar shadow fell on West Cornwall where visitor numbers were huge bolstered by a huge press and television contingent.

Sadly, cloud cover stopped many from seeing totality, with just a handful of places being lucky enough to have a break in the cloud. The experience of feeling the temperature drop, nature falling silent and the lunar shadow sweeping across the landscape was memorable in itself.

In the world of music, album releases unveiled this month included *Here I Stand* (Oyster Band), *Edge Of Forever* (Lynryd Skynyrd), *Mary* (Mary J. Blige), *J-Tull Dot Com* (Jethro Tull), *Christina Aguilera* (Christina Aguilera), *The Vault: Old Friend 4 Sale* (Prince), *Risk* (Megadeth) and *Tonight's Decision* (Katatonia).

9 August saw the death of sports presenter and journalist Helen Rollason who died from cancer of the colon aged just 43.

16 August saw the hit television quiz show *Who Wants To Be A Millionaire?* transfer successfully from UK to American TV. The US presenter was Regis Philbin who asked the 15 multiple-choice questions that could win the contestant one million dollars.

Among the August movie releases was the comedy superhero movie *Mystery Men*, starring Ben Stiller; supernatural chiller *The Sixth Sense*, starring Bruce Willis; a remake of *The Thomas Crown Affair*, starring Pierce Brosnan and the comedy *Bowfinger* with Steve Martin and Eddie Murphy.

Super Robot Pinball

"TO FIGHT MONSTERS, WE CREATED MONSTERS OF OUR OWN"

#102

» JUPITER CORP » GAME BOY COLOR » 2001

It's not an infrequent occurrence to see Japanese game titles that seem like three disparate words have been thrown together to make a name. I wouldn't be surprised to see 'Super' and 'Robot' together, or 'Super' and 'Pinball' or even 'Robot' and 'Pinball', but the three together? Woah, I need some aspirin!

Anyway, the point is that *Super Robot Pinball* is one of those games I acquired at random and thoroughly loved straight away. This pinball game plays very differently to other pinball games, in that it's more *Pokémon Pinball* than *Psycho Pinball*. See, you'd be there, happily smacking your ball around the table racking up a ridiculous amount of points, when suddenly everything goes panicky and some demonic hell-robot pops up. Following this, you must scramble your own hero robot, and then go off to another table to fight the hell-robot.

These robots all originate from various popular giant robot anime thingies, such as *Gundam* and *Evangelion*, so if you're into that sort of thing you can have a fair bit of fun trying to identify all of the super-deformed characters on offer.

There's some nice-looking cutscenes that pop up every so often during the battles, and the actual game looks more like a Neo-Geo Pocket game than a Game Boy Color game (which is a big compliment, by the way). Yeah, it's a lot better than *Pokémon Pinball*, and probably just as good as *Kirby's Pinball Land*, so if that's your 'thing', then go for it. I'm not stopping you, only your conscience is. ✱

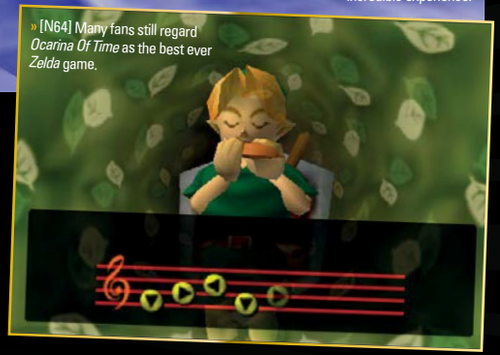
RYAN DAVIES

NINTENDO'S MIDAS TOUCH

It's amazing to think that Nintendo's 64-bit console recently passed its 20th anniversary. To celebrate this momentous occasion we reveal 64 essential things that make us love the system

Official retro GAMER Seal of Quality

» [N64] *Super Mario 64* broke boundaries upon release. It's still an incredible experience.



» [N64] Many fans still regard *Ocarina Of Time* as the best ever *Zelda* game.

01 THE CONSOLE

On paper, the Nintendo 64 seemed like a huge gamble back in the mid Nineties. It was built on Silicon Graphics technology that was unproven in the games arena, it used cartridges at a time when the industry was shifting towards cheaper and more spacious optical media and it came bundled with a bizarre-looking controller that only made sense when it was in your hands. However, taken in a wider context, it's easy to see why Nintendo's higher-ups were supremely confident about the console's chances; following the stunning commercial success of the NES, Game Boy and SNES, the Japanese firm was unquestionably the company to beat at the time and the N64 was viewed by many as the platform that would continue Nintendo's dominance.

Of course, the benefit of hindsight means we now know that things didn't quite go according to plan. Still smarting from being jilted by Nintendo a few years previously, Sony gatecrashed the games industry and thoroughly embarrassed 'The Old Guard', gaining the unflinching support of key third-parties such as Konami, Capcom, Namco and – possibly most painful of all for Nintendo – SNES stalwart SquareSoft. These days the notion of a Nintendo console relying almost solely on first-party software isn't all that shocking – the Wii U has certainly been in that boat – but the N64 arguably marked the first time that the Kyoto veteran found itself wanting in terms of publisher and developer support. The vast majority of the console's big hitters were all home-grown efforts, or came from second-party studios firmly ensconced beneath Nintendo's wing. The pattern began with the sublime launch title *Super Mario 64*, and would continue all the way up to *The Legend Of Zelda: Majora's Mask* and Rare's excellent *Banjo-Tooie*. The N64 was a machine that you bought primarily to play Nintendo games.

While the lack of *Final Fantasy* and *Street Fighter* may have curtailed the commercial success of the N64, the fact that it became so closely linked with Nintendo's own output ironically made it feel all the more special. While Sony was largely reliant on other companies to produce its bestselling PlayStation games and Sega's short-burst arcade conversions began to lose their appeal in the living room as players demanded more bang for their buck, it fell to Nintendo's crack network of internal studios to produce the kind of groundbreaking software that defined the era. The aforementioned *Super Mario 64* laid down the foundations of the 3D action genre, influencing not only hordes of

» [N64] Many PlayStation owners scoffed at the N64. That soon changed upon playing *GoldenEye*.

02 64-BIT POWER

■ Atari may have claimed to have the first 64-bit console, but in reality the Jaguar used 64-bit architecture in conjunction with two 32-bit RISC processors and a 16/32-bit Motorola 68000, while the N64 offered true 64-bit power. Today, 64-bit processors can be found in all gaming systems and the architecture has become the standard for the industry. However, it was Nintendo's forward-thinking and that vital team-up with Silicon Graphics which paved the way for this revolution; while Sony and Sega were happy with 32-bit machines, the Big N strived to go one better and broke new ground as a result.

THE N64 KID

YouTube sensation, Brandon Kuzma, is all grown up, but he still loves the N64

Did you know you were getting a N64 or was a surprise?
We were told by our parents it was never gonna happen... 'melts your brain' and all that. So to see it under the wrapping paper felt unreal. For a second I thought it was too good to be true, and that there had to be a catch. Well, it turned out there was... we weren't allowed to buy any games. The plan was to rent from blockbuster, however this didn't last long.

Why did you upload your video and did you expect it to go viral like it did?
We would always would raid this chest of VHS-C home movies to watch as our form of entertainment back then... my dad always documented everything. That N64 moment was always a classic tape we'd laugh at, along with the time my aunt accidentally nailed her six-year-old son in the face with a snowball from 50 feet away. Anyways, I was into making websites to show videos on that I would make. YouTube didn't really exist then or at least I didn't know about it yet. So, one day I uploaded the video straight into the html code and sent it to my buddy to see if he thought it was funny with the added slowmo. From there, I posted it to a skateboard filming forum called skate perception, and [without me knowing] someone by the username 'raw64life' uploaded it to YouTube (youtube.com/user/raw64life). About a week later, I checked my MySpace and noticed I had pages upon pages of friend requests and didn't know why. It took a couple days to realise it was on YouTube, and was getting a lot of attention.

What is it about the console that you like so much?
Man, it just felt *right*.

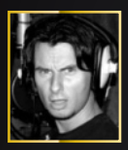
Why do you think the N64 remains so popular?
For us Eighties and Nineties kids, I think it could mainly be linked to nostalgia. Pure joy of finding something new, and letting your brain get lost. But the new generation that didn't grow up with it, I think are intrigued just from hearing about this legendary console from everyone else. I mean... it's *Nintendo*.

03 GOTTA COLLECT 'EM ALL

■ Limited edition consoles are all the rage nowadays, but before the days of the N64 they were a relative rairty. Sure, you had various systems that were packaged with popular games, but you rarely had different coloured models and matching joypads. Nintendo's console was one of the first to run with the idea, and, alongside Sega's Saturn, ensured that hardware collectors always had different variations to add to their growing collections. Whether it was a gorgeous-looking gold console or the colourful Pikachu model there was something for everyone.

KEV BAYLISS

The ex-Rare industry veteran spills his love for Nintendo's console



What's your favourite N64 game and why?
Easily *Mario 64*, because it was the first 3D game I fell in love with. Excellent graphics, an immersive world and fantastic gameplay – I played it for weeks. In fact, I think I'm going to have to play it again soon, now that I've reminded myself just how good it was, and still is!

As a developer, what was your favourite element of the N64 hardware?
Hard to say really, it was a leap forward from 2D graphics, so of course the whole development process was completely different. This was very exciting and offered us so many possibilities when designing levels, and character control too.

What were your first thoughts when you picked up that unique controller?
The controller had suddenly also become three-dimensional, and rather than a keypad, we now had a joystick which gave us much more control over a character's movement. I used to play around with the controller when creating *Diddy Kong Racing* and amuse myself for hours by making the car manoeuvre in so many different ways which would not have been possible on any previous Nintendo controller.

Thinking back, what aspect of the N64 would you have changed if you could?
If I could have changed anything I would have loved larger capacity for textures. We managed to squeeze a lot more from the hardware on later projects, but I think that you were always wanting a larger texture resolution for your graphics. On the other hand we had to make as best use out of the small texture dudes as we could, which taught us to be more creative and also helped create a unique look for many N64 games. Oh, and the look of the console itself, I absolutely hated it back then, but now I look and see all of these fancy ones in orange and other cool colours, which makes me want to buy one again.

» [N64] Nintendo's console excelled at multiplayer gaming, so titles like *Micro Machines 64 Turbo* were plentiful.

04 THE IMPORTANCE OF SILICON GRAPHICS

■ In the early Nineties, Silicon Graphics was seen as the pinnacle of computer graphics hardware. When computer-generated visuals began to surface in Hollywood, it was Silicon Graphics' hardware doing the heavy lifting – between 1995 and 2002, every film nominated for an Academy Award for Distinguished Achievement in Visual Effects was created using a Silicon Graphics system. The cachet which came with the name helped Nintendo build anticipation for the N64. By teaming with the company, the Kyoto firm was sending out a clear message to its rivals and the industry at large – 'We're dealing with the future, everyone else is in the past.'

'me-too' cute and cuddly platformers, but also establishing the framework which practically every 3D title would adhere to over the next 20 years. *The Legend of Zelda: Ocarina Of Time* took the stale adventure genre and did the same trick, offering players the kind of immersive 3D world that had previously been confined to their imaginations. Other standout releases – such as *Star Fox 64*, *F-Zero X*, *Pilotwings 64* and *Mario Kart 64* – all proved that when it came to creating the best, Nintendo was practically untouchable.

Then there was Rare. The legendary UK studio is now part of Microsoft's empire and – if you were feeling particularly uncharitable – could be seen as struggling to match its Nintendo glory days, but during the N64 period it was revered as one of the world's leading development lights and augmented Nintendo's own first-party content with some of the best titles of the generation. Rare established its reputation on the NES, Game Boy and SNES, but it would be on the N64 that the Twycross firm truly cemented its position in gaming history. Early titles like *Blast Corps* and *Killer Instinct Gold* showed a company getting a feel for the tech, but it would be later releases like *Diddy Kong Racing*, *Banjo-Kazooie* and *GoldenEye 007* which would turn heads and win over a generation of new fans. The latter was a particularly potent weapon in the console's armoury; not only did it outgun many first-person shooters on the PC, it flew in the face of the popular opinion that games based on movies were uniformly terrible. Bond's penchant for shooting baddies in the face also ran contrary to Nintendo's squeaky-clean, family-friendly image, but it was precisely this kind of content that the company needed to fight back against Sony's 'cool' and 'mature' PlayStation. In fact, the N64 was perhaps the first time that Nintendo made the conscious effort – in the west, at least – to balance its software output between its 'safe', kid-friendly titles and games aimed at the players which had grown up alongside the company's 8-bit and 16-bit systems and now demanded experiences of a more mature persuasion.

05 STICKING WITH CARTRIDGES

■ Many critics will state that Nintendo's decision to stick with cartridges when the entire industry was moving to CD-ROM cost it dearly, and it's certainly true that the decision resulted in expensive games, annoyed publishers and limited storage space. However, it also meant that loading times were almost non-existent when compared to CD, and developers were able to harness increased access speed to build more convincing, immersive worlds. On a more superficial level, it's much more satisfying plugging in a cartridge than it is inserting a CD-ROM – something that has become even more apparent over the past two decades.

» [N64] Nintendo's console had a number of great exclusives, this is the rather spiffy *Doom 64*.

"I used to play around with the controller when creating Diddy Kong Racing"

Kev Bayliss

Of course, software was just one side of the N64's appeal. While it could be argued that the console's chunky, plastic design was something of a throwback when compared to the sleek, consumer electronics look of the PlayStation, Nintendo's console retained the playful, toy-like aesthetic which made the firm's previous hardware so appealing and approachable. From the colourful buttons on the pad to the satisfying, old-school sensation of inserting cartridges, the N64 tried to maintain links with the past while simultaneously pushing the boundaries of the industry. Nowhere was this more apparent than in the design of that iconic controller; a three-pronged affair which could be held in a variety of ways depending on the game in question. For titles like *Killer Instinct*, the eight-way D-pad was the input of choice, but *GoldenEye 007* required you to grip the middle of the pad so you could access the analogue stick and Z-trigger, the latter of which was found on the underside of the unit. Analogue control wasn't new to the games industry, even back in 1996, but Nintendo was the first hardware maker to bring it to such a large number of players. The moment you realised that you could make Mario shift from a saunter to a spring with just a little push of the stick told you all you needed to know – this was an absolutely groundbreaking move in game control and it's little wonder that Sony and Sega quickly released their own analogue interfaces, a clear admission that both publishers had been caught napping.

The history books are pretty clear – PlayStation: over 100 million sold worldwide, N64: 32 million – but pure sales figures surely cannot be seen as a true indicator of worth in this case. Siding with Sony during this particular console war meant missing out on some stunning videogames, games which would influence the course of the industry for years to come. Where would the console FPS genre be without *GoldenEye*? Would we have such assured 3D action titles without *Mario 64*? How much additional catching up would have been required in the realm of 3D adventure games were it not for the existence of *Ocarina Of Time*? When would analogue control have become standard had Nintendo not taken the plunge, given than both Sony and Sega decided against bundling such pads as standard? These are all questions which we don't have to ponder, as the N64 – despite losing out to the PlayStation in the long run – ended up being far more influential than its sales total would suggest. That's Nintendo's Midas touch.

20-Year Anniversary

CHRIS SUTHERLAND

The Playtonic maestro revisits Rare's halcyon days on the N64

What was the N64 like to program for?
This was the first time some of the Rare engineers had coded in C – until then, everything had been written in assembly language.

Going from assembler, where you hand-coded every instruction the processor used, to C where you were more reliant on the ability of the compiler made a few folks wary at first – people were asking: 'Could we trust the compiler to do a better job than humans?'

In some ways, the machine felt underpowered, possibly because we'd previously been working with high-end prerendered visuals displayed as animating 2D sprites, so having to render everything in real time meant the number of moving items on the screen was less than we'd been used to. That seems kind of weird when we think of consoles these days and we expect each one to be more x times powerful than that the previous, but here this was transitioning to a different way of displaying and interacting with games, and the starting point was quite basic.

Why Was Rare able to get so much out of the N64?
There's a few reasons, all of which related to extra development time! First, we were probably one of the first studios to have access to an N64 devkit. Second, the Rare teams had been used to working with 3D models previously, so, although the tools may have been a bit different and we had to actually lower our polygon count and texture sizes, we were up to speed with the principles. Thirdly, some of our games actually had 'extra development practice time' before they started development - *Banjo-Kazooie* had about an extra year of previous work as '*Dream*' and *Conker's Bad Fur Day* began as '*Twelve Tales*'. Although much of the code and assets may have been redone, the earlier phases meant various tools and workflow could be put in place. Finally, Tim and Chris had a 'ready when it's ready' approach. This approach would I believe have been sustained via sales from Rare's NES/SNES titles.

What's your favourite N64 game and why?
It's hard to justify choosing anything other than *Mario 64* for showing how a platformer could work in three dimensions. But I'm going to choose... *GoldenEye 007*, and not specifically because it was a Rare title, but because a group of us played four-player split-screen for pretty much every lunchtime over several years!

What were the N64's strengths?
Being the first console where games could display real-time rendered visuals – being first means a lot if you are exploring new methods of play. The controller: the idea of an analogue stick was a revolutionary jump. But, ultimately, it was the software that set it apart – in particular with the genre-defining *Mario 64*.

DEFINING MULTIPLAYER

06

The N64 ushered a new era of multiplayer and set the standard for years to come

While it's important to remember that the N64 wasn't the first console to feature four controller ports, it standardised them going forward. The Atari 5200 beat it to the punch and several systems featured ways of adding controllers, but the N64 wore its multiplayer endorsement on its sleeve. Many games were built with four controllers in mind, meaning multiplayer gaming nights became the norm rather then the exception.

07

S.R

Sam picks...

1080° SNOWBOARDING

■ *Cool Boarders* may have paved the way for the over-the-top likes of *SSX*, but *1080°* was the more intelligent and complex game. Controls seemed complicated at first but once you got into the flow, gliding down the mountains felt both effortless and empowering, and landing a perfect trick was just the best feeling.

08

SUPER SMASH BROS. 1999

■ Nintendo's unconventional brawler is still one of the finest multiplayer games on the N64. The 12 available characters all play very differently to each other – as well as assure that popular Nintendo franchises are suitably represented – while the relatively cramped stages ensure that you'll always be involved in a frantic scrap. Although the mechanics have obviously been refined in the later *Smash Bros.* games – notably in its direct GameCube sequel, *Super Smash Bros. Melee* – there's still something wonderfully pure and fun about the original.

09

MARIO PARTY 1998

■ *Mario Party* was a big success for Nintendo and it's easy to see why. It features all the company's most famous characters, from Mario to Kirby, and sees them all battling for supremacy in 50 varied mini-games. The progression around the large, interactive game boards could be a little long-winded at times, but the entertaining mini-games more than made up for it. Whether you're blowing up Koopas to make them burst, diving for treasure or simply walking across tightropes, the gameplay was constantly entertaining and filled with variety.

10

TUROK: RAGE WARS 1999

■ Although it received a relatively lukewarm reception from critics upon its 1999 release, *Turok: Rage Wars* earned itself a place in N64 cartrige slots thanks to its four-player action. Like Rare's *Perfect Dark*, it introduces AI bots to multiplayer, too. Unlike its stablemate, however, *Turok: Rage Wars* is purely a multiplayer experience, channelling the chaotic pace of *Quake III* but adding in dinosaurs and some truly brutal weapons for good measure. Icky weapons, well-designed levels and the ability to play as a raptor meant that you'd be having fun for a while...

DUNCAN BOTWOOD

Perfect Dark's level designer revisits Rare's awesome multiplayer game

What did the Expansion Pak bring to *Perfect Dark*?
The single-player game, to be brutally honest. If you didn't have the Expansion Pak you only had access to the multiplayer game.

What improvements did it offer over *GoldenEye*?
We had a more mature art process for creating and texturing environments and a more coherent sense of what the gameplay should be from the start. The multiplayer was much more extensive and we pushed hard on the customisation options. Most of the audience reaction from *GoldenEye* was to do with the multiplayer so we wanted to make sure that it got more dev time. Not tricky – *GoldenEye*'s multiplayer mode was made in six weeks by two people.

How integral do you feel that the AI bots were to *Perfect Dark*'s multiplayer?
They were awesome. Full kudos should go to the coders that worked on them. They added so much with just simple character rules (e.g. kill the player who killed me last; kill the scoreboard leader, etc.). They effectively added a single-player challenge mode, a multiplayer co-op mode *and* a free-for-all brawl mode to the game. And I think you had access to that without the Expansion Pak.

What were the main improvements over *GoldenEye*'s multiplayer for you?
A better range of options for customising the game by swapping out any and all of the items that appear in the maps, changing the game rules like number of lives and so on. You could even add a health handicap to level the playing field between high and low skilled players. Then you could save your settings to the Controller Pak and take them to your friend's house if you needed to – the combat sims, too, of course.

What's the best weapon in the multiplayer mode for *Perfect Dark* and why?
The Laptop Gun. Decent SMG with an above average mag size... and then a turret. The FarSight was a little too tricky to use to be the best weapon, and you were reasonably safe from it if you kept moving. The Laptop Gun suits a sneaky horrible person, like myself, who likes setting traps for other people.

What's your favourite N64 game and why?
Smash Bros., beyond a shadow of a doubt. *Smash Bros. Melee* is a close second – but it's on GameCube. Peerless design and implementation. Who knew Kirby was such a stone-cold killer? Who knew Ness could be so annoying? Falcon Punch? Yes, Captain. Yes you can.

MARIO KART 64 1996

■ We nearly didn't include *Mario Kart 64*, due to the inclusion of the Blue Shell, but that wouldn't be fair to it. Even though the shell is massively overpowered, there are plenty of reasons why *Mario Kart 64* was an essential multiplayer experience. While the tracks are a little on the wide side, they're all great fun to race around and are filled with all manner of obstacles to negotiate. As entertaining as the Versus Mode of *Mario Kart 64* was, it was the insanely hectic Battle Mode (where you must burst your opponents' three balloons), which really fuelled competitive play.

PERFECT DARK 2000

■ We know what you're thinking: 'Where's Bond?' Well, we are going to say this rather quietly, but *Perfect Dark* was far better than *GoldenEye*. There were better-designed levels, excellent new weapons (including the Laptop Gun) and the same tight controls that worked so well in *GoldenEye*. Oh and it used AI bots, too, ensuring you could always play, even when you were on your own. There's even an excellent co-operative mode, allowing you to go through the entire game with a friend. Stand down, 007: we're going with Joanna Dark for FPS supremacy.

13 A RARE TALENT

Nintendo's right-hand studio boasted brilliance...

It's almost impossible to state just how important Rare was to Nintendo during the late Nineties. If the Twycross-based developer had been good on the SNES – delivering one key trilogy of games, *Donkey Kong Country* – but it was phenomenal on the N64, cranking out excellent games at a furious pace for the entire life of the console – and most of them were original properties, too. How do you even pick which games to focus on with a line-up this good? For you, dear reader, we shall try…

14 BLAST CORPS 1997

■ If any of Rare's N64 games can be considered to have flown under the radar, it was this carnival of destruction. The premise is that stuff needs to be knocked down, and you are the only person that can do it – whether that's in a bulldozer, a massive dumptruck, or even a jet-fuelled robotic smashing machine. There's a primal thrill in breaking things, and this game captured it perfectly.

15 DIDDY KONG RACING 1997

■ Only a madman would try to fit a racing game into an adventure format – but Rare was full of madmen and they made it work. Diddy Kong, Banjo, Tiptup and friends race across a variety of stages, using hovercrafts and planes to add variety to the regular karting gameplay. With bright visuals, jolly music and memorable boss races, it was a highlight of many an N64 gamer's collections.

16 BANJO-KAZOOIE 1998

■ Who'd have guessed that a project that started on the SNES would become one of the top N64 games? Aside from the lovable bird and bear duo that give the game its title, the appeal of *Banjo-Kazooie* lies in the sheer amount of stuff to be done – you have so many moves at your disposal, and every level is packed with objects to find and tasks to complete. This was platforming's peak.

17 JET FORCE GEMINI 1999

■ Blasting aliens has been a fun part of videogaming since *Space Invaders* and *Jet Force Gemini* was Rare's attempt to bring that sci-fi violence to the N64. It lives up to the developer's high standard of presentation, while offering a boatload of baddies to tear apart with lasers. Plus, the bear-like Tribals are adorable, making saving them worthwhile – even if the controls weren't perfect.

18 CONKER'S BAD FUR DAY 2001

■ Once upon a time, Conker was a sweet-natured platform game mascot, but Rare warped him into the filthiest animal we now know – and we're thankful for it. Nintendo declined to publish this game, which featured vomiting, alcohol, profanity, violence and, of course, a singing pile of poo. It was also a highly-enjoyable game, which is why you'll be lucky to find a copy for under £80.

Q&A: CHRIS SEAVOR

We sit down with the filthy animal who brought Conker to the N64

What's your favourite N64 game and why?
Ocarina Of Time. I came late to the *Zelda* games when I bought a cheap SNES not long after I started at Rare, and I've loved them ever since. It's also a rather good 'Design 101' handbook which I often return to for inspiration when I get into a rut with my own fumblings. 'Classic' is an overused term in the industry today, but *Ocarina* defines the word.

As a developer, what was your favourite element of the N64 hardware?
The controller was a revelation, although when I first saw the prototype I thought, 'WTF is that?' It had the functionality of the released version but not the aesthetic. However, once you picked it up and got a feel for it I understood this was something different. Doesn't matter a jot what the hardware can do if the point of contact doesn't compliment the games it will run. Of course, as always with Big N, the controller is developed in tandem with the software it will touch.

How did you feel about Nintendo sticking with cartridges for the N64?
Fine. In fact, I like cartridges! Fast access outweighed the main disadvantage of the smaller storage size by a mile, and again it fitted into the type of games Nintendo were making... FMV? Nah, that shit got old quickly, and no one said the load times on the PS were awesome.

What aspect of the N64 would you have changed?
Memory for textures was very limiting. They were tiny, and if you wanted any alpha as well they were microscopic. The youngsters today making levels and characters don't know how lucky they are! Having said that, these restrictions also allowed Rare to shine, because (and let's be honest) we really pushed the boundaries of the system graphically, more so than Nintendo.

19 Luke picks...

SPACE STATION SILICON VALLEY

■ Original puzzle games were few and far between on the N64, but at least here I got the robotic animal silliness of *Space Station Silicon Valley*. Possessing creatures granted abilities to help reach new areas and overcome challenges. Truly an overlooked gem in the N64's library.

TAKING CONTROL

The 'Trident' introduced innovations that would be copied for years to come...

Having successfully innovated with its previous NES and SNES controllers, Nintendo wasn't content to deliver a conservative evolution for its bold new 64-bit console's controller – instead, it delivered an eclectic mixture of classic elements and new features which showed dedication to the 3D gaming future. The resulting unique design became an integral part in not only the N64's legacy but gaming as a whole.

20-Year Anniversary

EXPANSION PORT

■ The ability for controllers to host secondary peripherals was rare before the N64 came along, and it was a feature that got good use. Controller Paks could store additional save data, and the Rumble Pak added force feedback – a feature which soon became standard. Additionally, the Transfer Pak allows players to read data from their Game Boy cartridges.

C-BUTTONS

■ It might seem odd that the N64 controller should have six face buttons, only to make four of them smaller and brand them collectively as C-buttons. However, it's a sign that Nintendo was thinking about 3D game design on a different level to everybody else – these were intended for camera control, hence the assigned directions.

ANALOGUE STICK

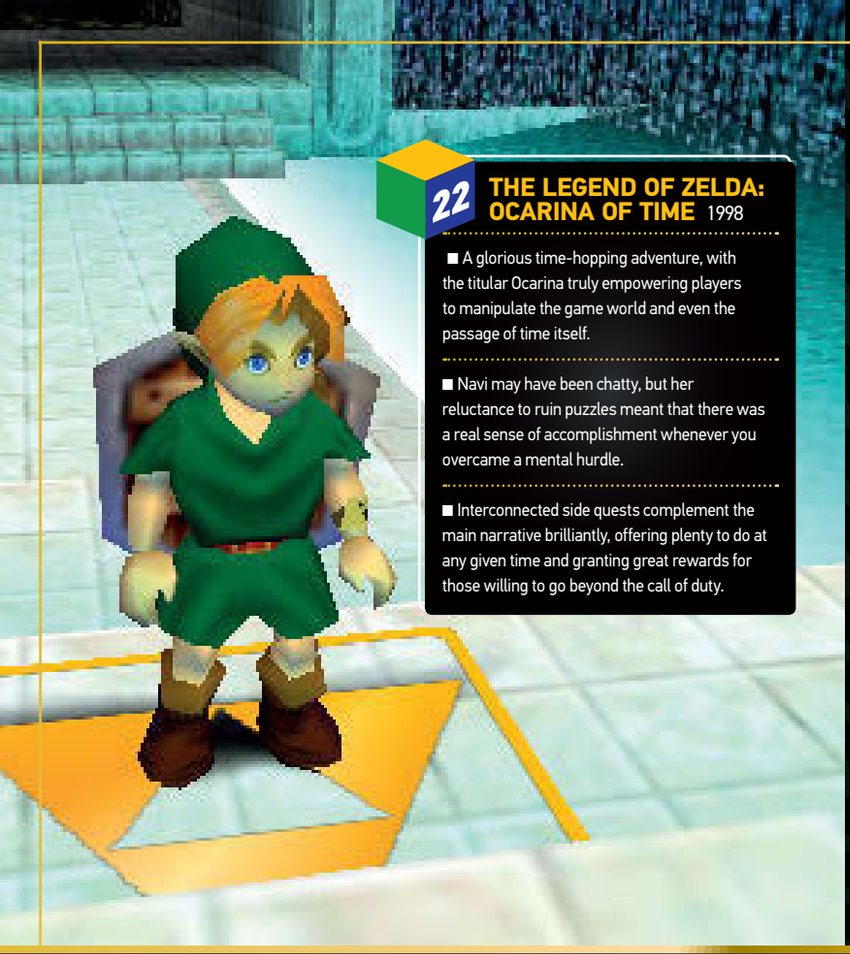
■ Analogue control dates back to the very earliest days of gaming, but by the mid-Nineties it had been relegated to arcade cabinets and oddball peripherals like Namco's NeGcon. The N64 controller correctly identified the need for more precise movements in 3D games, and other manufacturers swiftly followed Nintendo's lead.

THE Z-TRIGGER

■ Nobody was putting buttons on the backs of their controllers before the N64 came along, but the trigger under the middle prong of the controller was a stroke of genius – it was comfortable and easily accessible. The idea has been a staple of controllers ever since, with triggers featuring on the Wii controller as well as other manufacturers' designs.

THE TRIDENT

■ The N64 controller was different to anything that had come before, and nothing since has been quite like it. This was in large part due to its three-pronged design, which was intended to make the controller comfortable to use whether you were playing with the D-pad or the analogue stick. It's a divisive design, but an undeniably innovative one which has its fans.

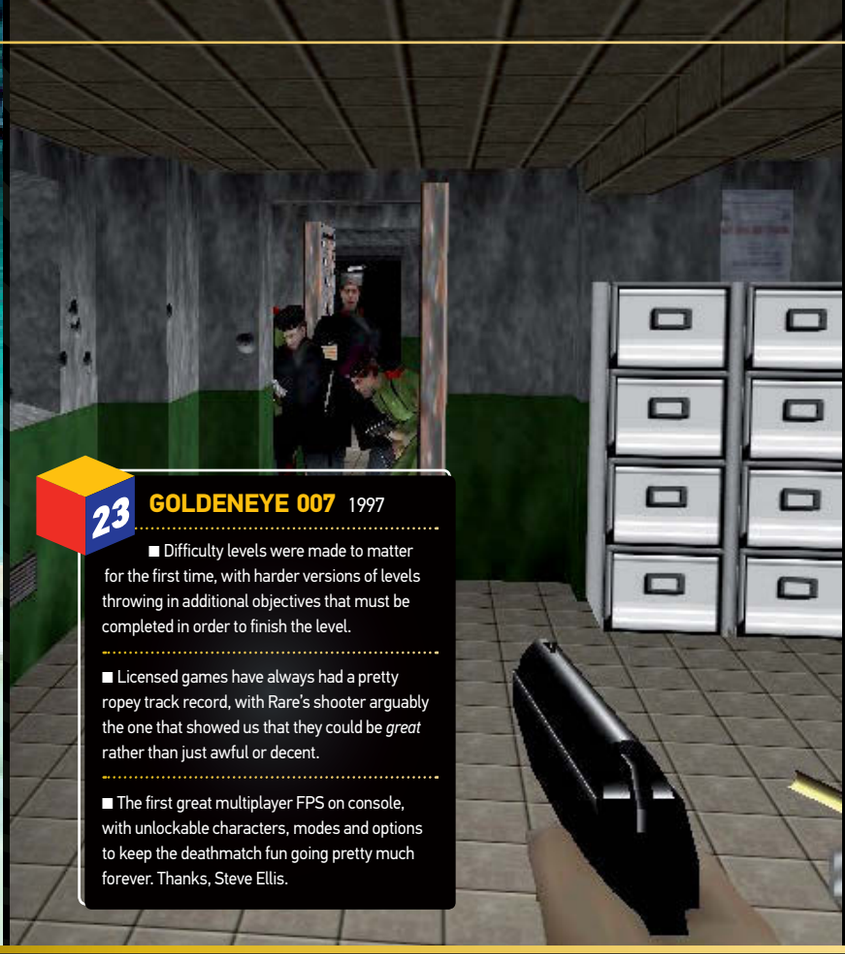


22 THE LEGEND OF ZELDA: OCARINA OF TIME 1998

■ A glorious time-hopping adventure, with the titular Ocarina truly empowering players to manipulate the game world and even the passage of time itself.

■ Navi may have been chatty, but her reluctance to ruin puzzles meant that there was a real sense of accomplishment whenever you overcame a mental hurdle.

■ Interconnected side quests complement the main narrative brilliantly, offering plenty to do at any given time and granting great rewards for those willing to go beyond the call of duty.



23 GOLDENEYE 007 1997

■ Difficulty levels were made to matter for the first time, with harder versions of levels throwing in additional objectives that must be completed in order to finish the level.

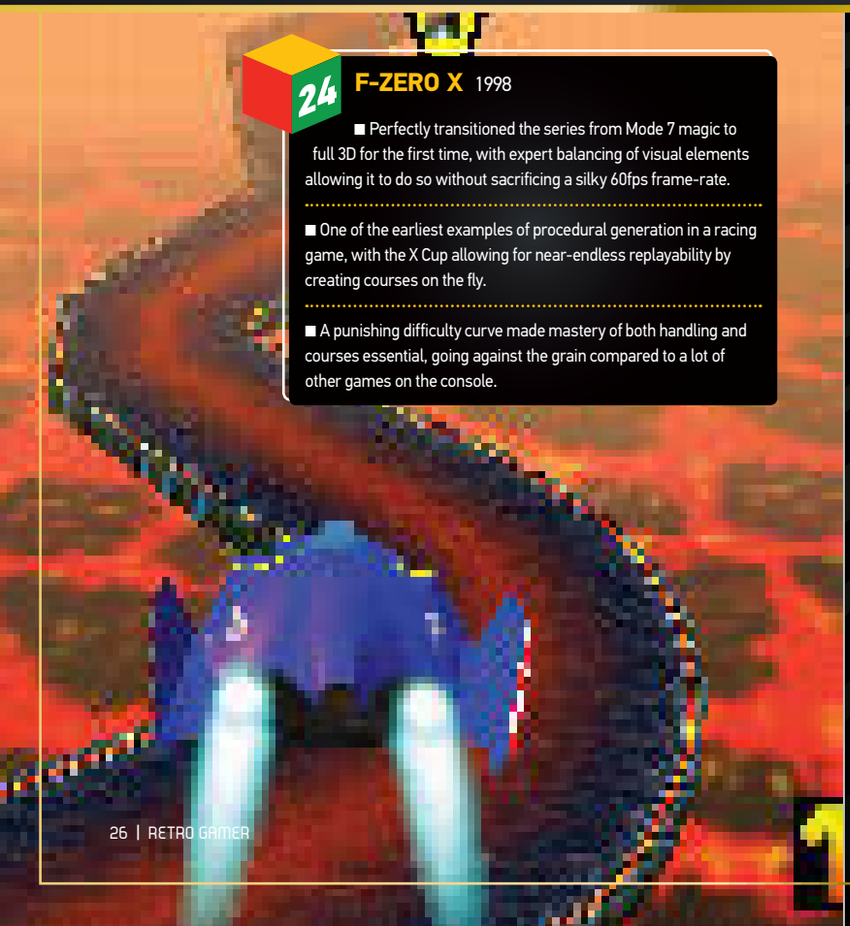
■ Licensed games have always had a pretty ropey track record, with Rare's shooter arguably the one that showed us that they could be *great* rather than just awful or decent.

■ The first great multiplayer FPS on console, with unlockable characters, modes and options to keep the deathmatch fun going pretty much forever. Thanks, Steve Ellis.

21 GENRE-DEFINING GAMES

The N64 may have had a smaller library than Sony's PlayStation, but its releases were no less important. In fact, some were groundbreaking…

When Nintendo created the N64, it couldn't have foreseen the impact that some of its games would have going forward. While certain games were a testament of their time, bravely blazing trails that immediately affected their own generation, a certain few would go on to influence genres for many, many years to come. It's telling that some of the biggest games of the N64 are still influencing certain games today. In fact, here's just a few of them.

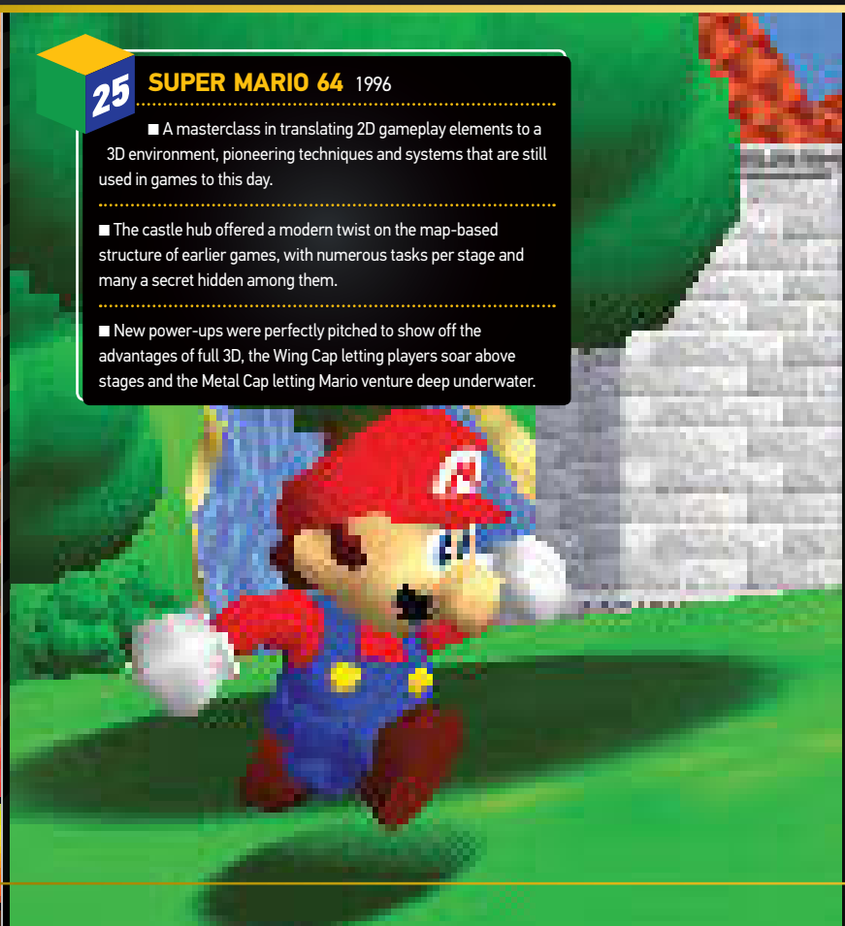


24 F-ZERO X 1998

■ Perfectly transitioned the series from Mode 7 magic to full 3D for the first time, with expert balancing of visual elements allowing it to do so without sacrificing a silky 60fps frame-rate.

■ One of the earliest examples of procedural generation in a racing game, with the X Cup allowing for near-endless replayability by creating courses on the fly.

■ A punishing difficulty curve made mastery of both handling and courses essential, going against the grain compared to a lot of other games on the console.



25 SUPER MARIO 64 1996

■ A masterclass in translating 2D gameplay elements to a 3D environment, pioneering techniques and systems that are still used in games to this day.

■ The castle hub offered a modern twist on the map-based structure of earlier games, with numerous tasks per stage and many a secret hidden among them.

■ New power-ups were perfectly pitched to show off the advantages of full 3D, the Wing Cap letting players soar above stages and the Metal Cap letting Mario venture deep underwater.

STEVE ELLIS

The creator of GoldenEye 007's stunning multiplayer gets misty-eyed

Why do you think Rare dominated on the system?
Rare's teams were in a fortunate situation where the management were able to shield them from the constraints that most other developers had to operate within. When you're breaking new ground, it's hard to do it according to a timetable and things usually take longer than you think that they will. Most of Rare's games were released later than originally intended because Rare's management were able to grant the extra time that they needed to allow them to become great. Other teams weren't so fortunate.

How does it feel know you created one of the N64's most defining games?
I feel lucky – in many ways it was an ideal time to get into the industry, just as it started to transition from 2D to 3D. New ground was being broken every day, and it was exciting to have the opportunity to be involved in a project where we had so many chances to push things forward and do things that hadn't really been done before. Almost two decades later it's great to look back and think, "I helped make that happen," and to see the steps that others have taken down the path that we were forging at that time.

When did you realise *GoldenEye 007* was going to be a big hit?
I remember discussing the sales potential with Chris Stamper as we approached release and the consensus within Rare's management was that we would sell between 2 million and 4 million units. The realisation that it might exceed those numbers came gradually. First we were sold out over Christmas 1997. Then we started to see weekly US rental charts, and week after week, *GoldenEye* was at number one. Then the awards started coming. It was probably only after that point that we really started to realise that the game was a hit – but even then, I didn't expect that anyone would still be talking about it after two decades!

How do you think *GoldenEye*'s multiplayer now stands up today?
To be honest, it's been a long time since I played it, and it's an interesting experience. While it's enjoyable to play for a while and remind myself of what made those games great, it's never something that I do for long periods. Games have moved on rapidly, and I soon find myself missing many of the developments that came later. I expect that playing *GoldenEye*'s multiplayer now would be a similar experience – it would be great to see some of the things that we did first, and maybe have a little fun along the way. But, yeah, I think I would soon start to miss the things that came later. I suspect that the aiming system would drive me mad, having gotten used to modern-day dual-analogue controls.

20-Year Anniversary

26

Drew Picks...

STAR FOX 64

■ We were wowed by the SNES original, sure, but *Star Fox 64* took everything *Star Fox* did well and supercharged it, making it the definitive game in the series. Heck, it's so revered that it was remade for the 3DS and even the most recent game in the series, *Star Fox Zero*, took heavy inspiration from this N64 classic. It's brilliant!

27

THE BEST LICENSED GAMES

The N64 proved that a licence didn't have to be throwaway rubbish

28

STAR WARS EPISODE I: RACER 1999

■ The long-awaited first instalment of the *Star Wars* prequel trilogy disappointed cinema audiences, but we did get something excellent out of it in the form of this excellent racer. LucasArts managed to turn a single sequence in the film into a fully fleshed-out game, with multiple tracks across a variety of planets and all manner of alien racers. It was capable of competing against franchises like *F-Zero* and *WipEout*, which says everything you need to know.

29

TONY HAWK'S PRO SKATER 2000

■ While it might have originated over on the PlayStation, Activision's extreme sports series was also beloved by N64 fans. An excellent effort was made to squeeze everything onto a cartridge, even including the licensed soundtracks, and the score attack gameplay with secret-filled levels is a formula that works anywhere. *Tony Hawk's Pro Skater 3* became the very last N64 game when it was released in 2002.

30

WWF NO MERCY 2000

■ Wrestling was going through an incredible boom period during the N64's lifetime, spearheaded by stars like The Rock and Stone Cold Steve Austin – and this game was an awesome representation of everyone's favourite non-sport. As well as offering lots of customisation options and championship modes with branching paths that represented the storylines of the day, it had an awesome engine that even factored in weight advantages.

31

BEETLE ADVENTURE RACING 1999

■ Doing a racing game where all the cars are of a single model is a risky proposition, but *Beetle Adventure Racing* pulls it off in style. That's because the tracks are the stars, rather than the cars – there are secret routes to discover, items to find, crazy jumps and even dinosaurs looming out of the dense jungle. It's not the most well-known N64 racer, but you'd be crazy to pass up on *Beetle Adventure Racing* if you find a copy.

32 THE EASTERN GIANT

Q&A: STEVE MERRETT

The ex-Nintendo Magazine System journalist dons his nostalgia glasses

What did you like about the N64?
It was just classic Nintendo, really. A games console that made a leap in terms of processing power. Everything about it was geared towards the playing experience, with the addition of the analogue stick on the controller allowing for more precision of control, and it also opened up games in terms of scale while retaining the instant accessibility for which Nintendo were famed.

Was their much competition with other magazines?
There was, but it was mild compared to previous format wars – mainly because the N64 was where Nintendo started to lose third-parties. During the SNES era, everyone got on board and the result was a buffet of eclectic titles. The N64 saw a few fall by the wayside, so there was less to go around so competition for what there was higher. Also, with SNES titles we would often receive advance copies of everything as ROM boards, but there was no such system in place for the N64, which meant a lot of visits to publishers or them coming to us.

Why do you think Konami had such a strong presence on the system?
Konami, like Nintendo, was very gameplay-focused. It created games that were enjoyable to play, so the N64 was a good fit all round. The N64 was probably the last console where a lot of Japanese invention came to light, with the likes of *Rakugakids*, *International Superstar Soccer*, *Goemon* and *Castlevania* building upon elements that had gone before, but using the processing power to make them more involving to play. Nintendo and Konami seemed to share views on the purity of gameplay, and I think that is why their titles stand up today. That said, Konami released very few games for the system over here compared to their 16-bit output, so while their hits were successful, its output was less than 30 per cent of before.

» [N64] *Castlevania* made the jump to 3D with its N64 titles, the catch was that they weren't very good.

Konami added some variety to the N64

While it wasn't as prolific on the N64 as it had been in previous Nintendo consoles, the level of quality present in the majority of Konami's N64 output was still exactly what you'd have expected from the house of *Gradius* and *Contra*. Even though its focus was clearly on the PlayStation, Konami helped keep the cartridge dream alive with updates of some of its best franchises as well as some interesting original titles.

34 INTERNATIONAL SUPERSTAR SOCCER '98 1998

■ Back when there were more than two teams in the running for the footy title, Konami's greatest threat didn't come from EA, from Gremlin, or in fact from any other studio – its closest rival was arguably itself. The *ISS* games that came out on the N64 were different to their PlayStation counterparts, more arcade-like experiences with simpler controls and a faster pace than the PSone titles that was pushing towards realism as it evolved into *PES*. This accessible style was perfect for the N64, encouraging multiplayer matches anyone could pick up without sacrificing too much depth.

36 RAKUGAKIDS 1998

■ Wowed as many had been by *Super Mario 64* and the raft of 3D games that came early in the N64's life, the late Ninteties wasn't a forgiving time for 2D games. Fighters struggled, with Capcom and SNK struggling to break through the 3D hype and trying find a new angle for 2D brawlers. It's original titles like *Rakugakids* that exemplify this scene best. Employing 3D tech for its backgrounds with crisp, colourful characters dancing around in front of them, Konami's playful fighter ranks among the most family-friendly ever made and as adorable as it is, it's still technically proficient as well.

33 MYSTICAL NINJA 2 STARRING GOEMON 1998

■ A fusion of Edo period Japanese culture and modern luxuries, the *Mystical Ninja* series is played for laughs and even if some of the references may soar over the heads of a Western audience, there's no denying that the games are great fun. The first *Goemon* release on N64 got swept up in the 3D revolution, its open areas meaning that despite some awesome moments, much of the wacky magic of the franchise was lost. For the sequel, Konami returned to what the series did best, going back to 2D gameplay and tightening the focus to create a game more in keeping with *Goemon*'s heritage.

35 HYBRID HEAVEN 1999

■ Given that the N64 was light on both RPGs and beat-'em-ups, Konami must've expected that announcing a game that straddled both genres was to invite a certain degree of hype. As such, many were disappointed in the final game, but we'd argue that *Hybrid Heaven* lives up to its name. Player character and enemies face off in one-on-one battles in real time before the action goes turn-based when a strike or grapple is attempted. The RPG mechanics are really cool, too – limbs level up individually, while new abilities can be learned simply by seeing an enemy use certain techniques.

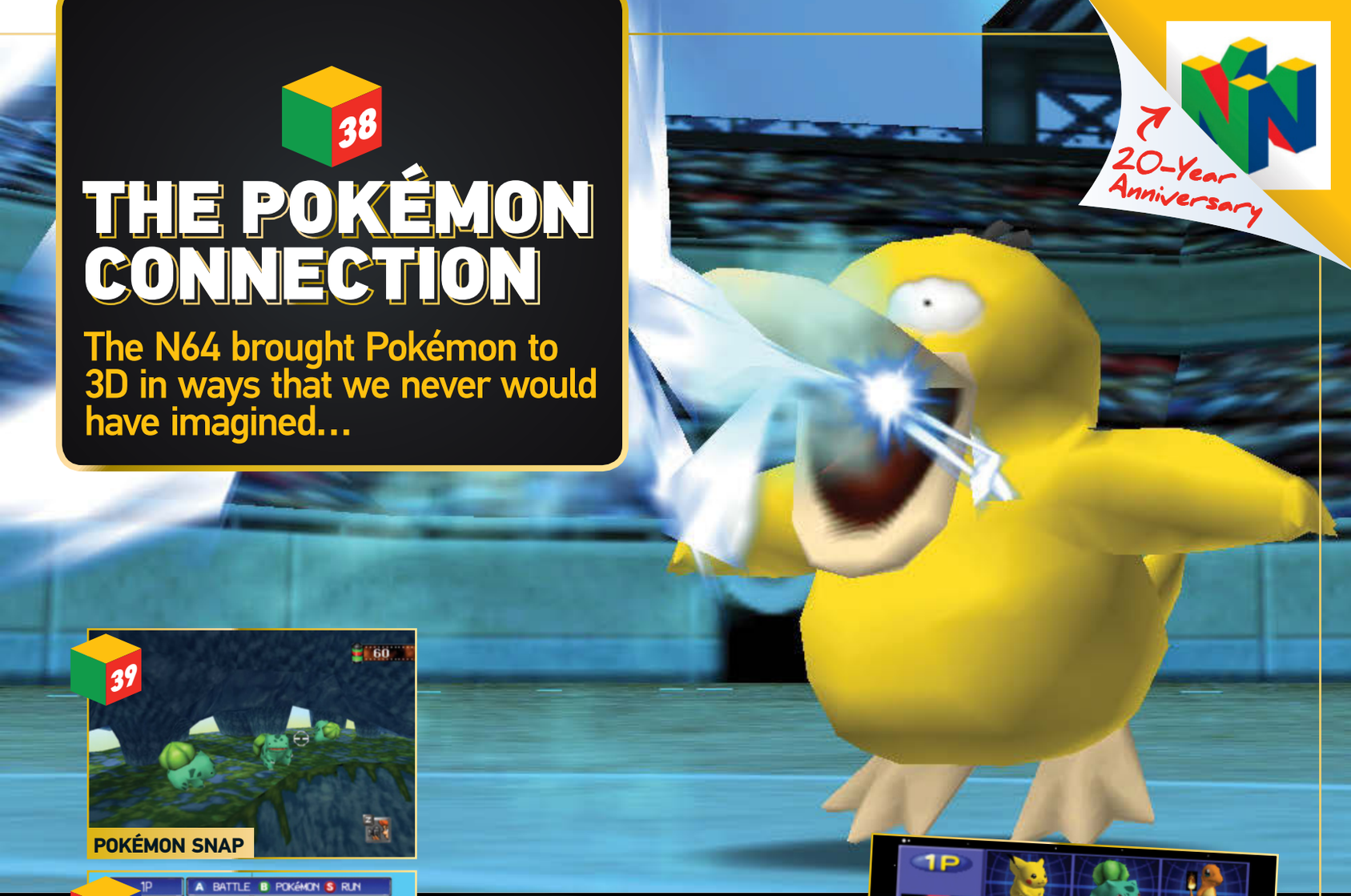
37 Nick picks...

SIN & PUNISHMENT: SUCCESSOR OF THE EARTH

■ If you need a reason to start collecting import Nintendo 64 games, *Sin & Punishment* might just be the very best one. The *Cabal*-style shoot-'em-up formula was taken to the extreme by Treasure, which added its signature boss fights and some of the very best visuals ever seen on the console.

38 THE POKÉMON CONNECTION

The N64 brought Pokémon to 3D in ways that we never would have imagined...



39 POKÉMON SNAP

40 POKÉMON STADIUM

41 POKÉMON STADIUM 2

42 POKÉMON PUZZLE LEAGUE

The N64 was perfectly timed to ride the *Pocket Monsters* wave and sure enough, Nintendo made like a surfing Pikachu. Few would argue that the best thing to come out of this period of Pokémania was **Pokémon Snap**, perhaps the greatest deviation from the usual catch-'em-all template. After all, what kind of fan wouldn't want to go on a Pokémon safari, snapping pictures of all their favourite monsters along the way? While mechanically simple, the way it layers on additional tools keeps giving new reasons to head back to older courses, each time with a greater understanding of what to look out for and more ways to interact with the environment. It was basically the perfect use of the N64's power to offer a different kind of window onto the *Pokémon* world, while the *Stadium* games delivered a far more traditional experience.

Given that *Pokémon* was a big deal in Japan long before it even released in the rest of the world, it should come as little surprise that we were always playing catch-up. What we know as **Pokémon Stadium** was actually *Stadium 2* in Japan, the original game releasing much sooner and in an incredibly limited form – only 40-odd Pokémon actually had the animations necessary to be used in battle, the rest merely existing as models in a 3D Pokédex. Holding fire for the full-featured sequel turned out to be the right play and between its myriad modes and the ability to import your Game Boy team, it was a great companion to the core games. **Pokémon Stadium 2** built upon the formula and added support for *Gold And Silver* carts and the additional 100 monsters that came with them, as well as beefing out every aspect of the game to provide trainers with a wealth of content… yes, including more wonderful mini-games for multiplayer fun.

On top of a slightly garish Pikachu-themed special edition console, there were also a few other Pokémon-flavoured curios for the N64. **Pokémon Puzzle League** was a basic yet entertaining match-three puzzle game with plenty to do to make up for its mechanical simplicity, while Hey You, Pikachu! was pure novelty value in cartridge form. By connecting special microphone adapter the controller, players could speak directly to Pikachu to get him to do… well, not a lot really. It never got European release, though if you do import it, be warned you'll need to put on your American accent if you want the little guy to even vaguely understand what you're saying.

PLAYING WITH POWER

Nintendo provided N64 owners with an important hardware upgrade

If there's one common thread that unites the consoles of the mid-Nineties, it's a need for more memory. Fitting everything into the available RAM was a problem for developers, and Nintendo had already planned to utilise a RAM expansion for the 64DD's planned multimedia applications. However, much like Sega had with the Saturn, Nintendo released it as a peripheral to improve its games. The Expansion Pak slotted into the front of the N64, replacing the pre-installed Jumper Pak, and effectively doubled its available memory.

What's worth applauding is the fact that Nintendo pulled off something that has been the downfall of many a platform holder in the past. The company managed to release a performance-enhancing upgrade without unnecessarily fracturing the console's user base.

43

44

TUROK 2: SEEDS OF EVIL

■ Acclaim developed this game on a 64DD development kit prior to the announcement of the Expansion Pak, and utilised the extra memory as an experiment. Seeing this running in a 640x480 high resolution mode at E3 in 1998 was the prompt that caused Nintendo to release the expansion.

45

DONKEY KONG 64

■ The king of collect-a-thon 3D platform games was the first N64 game to require the Expansion Pak as standard, solely because of a bug in the non-expanded code. The game had to ship with the peripheral as a result, at a major cost to Nintendo. Whoops!

46

HYDRO THUNDER

■ While Nintendo's Expansion Pak was often used to up the resolution of numerous N64 games, it enhanced games in other ways, too. While titles like *Perfect Dark* wouldn't work without it, *Hydro Thunder* benefitted by letting four players race at the same time.

47

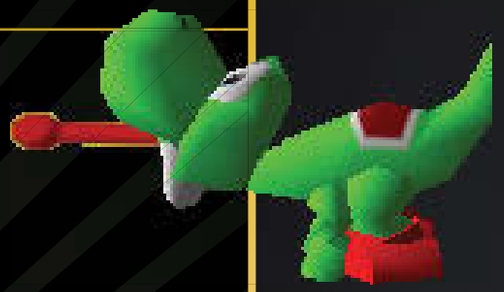
THE LEGEND OF ZELDA: MAJORA'S MASK

■ How do you top one of the best games ever? Well, if you're Nintendo you totally change the design, and then give it a nice big graphical upgrade to boot. As compared to *Ocarina Of Time*, *Majora's Mask* features improved draw distance, better effects and ful-3D building interiors.

48

STARCRAFT 64

■ Most Expansion Pak games reward you with improved visuals or expanded multiplayer support, but Blizzard's real-time strategy conversion went one step further – the additional *Brood War* missions were only available if your N64 had the Expansion Pak installed.



20-Year Anniversary

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A NAME OF QUALITY

Midway was one of the few publishers at the time that took a shine to Nintendo's 64-bit console

Once a major player in the development space, this was the era that saw Midway really turn its attention to publishing – while arcade development and ports continued, much of the company's work would be in licensing, marketing and publishing other titles for release. Those in charge really had a good head for it too, with Midway picking up some huge licences to sit alongside its own arcade ports. In fact, we'd argue that Midway's supplimentary output was even better than its first-party stuff on N64, as these wonderful things help to prove.

50

DOOM 64 1997

■ Developed by Midway itself under supervision from id, this 'port' (of sorts) of the FPS classic is unique in that it uses redrawn assets for enemies and weapons that you won't see in any other version – monsters, while familiar, have a different look, most weapons have new effects and looks but most notably of all, it's a dark, gory game on a Nintendo platform, something that had been avoided during the previous generation. Timing wasn't on its side, however – launching with no vertical camera movement and no split-screen multiplayer mere months ahead of *GoldenEye* meant that even the granddaddy of the genre was no match for good ol' Bond.

51

BODY HARVEST 1998

■ Often seen as a progenitor to the *Grand Theft Auto* series, DMA Design hit an early hurdle when Nintendo, originally meant to be the game's publisher, it delayed and eventually dropped *Body Harvest* from its proposed launch window slot and left DMA looking for a new publisher. Gremlin picked it up in Europe, but Midway was the one to deliver the game to the US. Featuring five time-spanning sandboxes filled with vehicles to pilot, aliens to mow down and tasks to complete all while keeping collateral damage as low as possible, it was a showcase of the new gameplay possibilities presented by more powerful hardware.

52

READY 2 RUMBLE BOXING 1999

■ While most fondly remembered by those who picked it up with their Dreamcasts, *Ready 2 Rumble* was treated to some decent ports by Midway and while it didn't quite look the part, the arcade-inspired gameplay made the jump to other systems more or less intact. Simple controls hide a surprising amount of depth, with skilled players able to parry or weave around blows to land their own counters – find face with fist enough times and you'll fill your Rumble gauge, allowing your boxer to enter a powered-up state and unleash a devastating barrage.

53

MICRO MACHINES 64 TURBO 1999

■ No publisher as prolific as Midway can boast a faultless slate, but it hardly seems worth getting bent out of shape over such inevitabilities when discussing the publisher that did a public service and picked up *Micro Machines* for release on the N64. *Turbo* is a port of *Micro Machines V3*, it's not quite up to the standard of the 16-bit versions but it is arguably as close as the series ever came to recapturing that magic. A 'Turbo' setting allowed for the pace of the action to be altered a la *Street Fighter II*'s ports, allowing for either high-speed madness or more tactical showdowns between pros.

WIL OVERTON

The industry veteran revisits the mid-to-late Nineties

What did you like about the N64?
I liked that it gave us all the Nintendo classics and, in nearly all cases, managed to successfully transfer them into the third dimension in real style. From *Super Mario* to *Star Fox* to *Mario Kart* to Zelda each N64 iteration of a famous series pretty much defined what that game would be like for a fair few installments to come.

I also liked the weird controller that really looked like it shouldn't have worked, but (I thought) managed to be really comfortable and easy to use.

Finally, I liked that it had the aesthetics of an old Fifties radiogram. That logo panel really should have glowed when it was on.

How did it compare in power to the PlayStation?
I couldn't begin to tell you if it was, technically, a more powerful system and maybe the lack of space on a cartridge, curtailing impressive prerendered cutscenes, sometimes made it seem like it didn't have the same welly under the hood but when the games shone it was more than a match for an equivalent title on the PlayStation.

Who do you think were the best developers for the system and why?
Apart from Nintendo themselves, Rare were the undoubted stars of the N64. Although you could argue that games like *Banjo-Kazooie* and *Diddy Kong Racing* simply expanded on existing Nintendo successes I think they more than proved their worth with more original fare like *Blast Corps*, *Jet Force Gemini*, *GoldenEye* and *Perfect Dark*. Strangely, all the Japanese names that we had championed so much on the SNES were suddenly far more quiet and offerings from the likes of Konami and Capcom seemed few and far between so maybe that allowed Western developers to stand out even more.

What's the most impressive game you've played on the system and why?
It'd be easy to say something like *Ocarina Of Time* (and yes, that did all blow our minds a little at the time) but I remember being the most impressed when we first booted up *F-Zero X*. In a time when racing games seemed more like time trials where you seldom saw another competitor to be suddenly faced with 30 racers all jostling for position was truly something. Others may champion the GameCube's follow-up - *F-Zero GX*, but *F-Zero X* still remains my favourite racer and N64 game overall.

Why do you think the system remains so popular?
A dose of Nintendo and Rare classics more than make up for a lacklustre showing from other developers. There are probably whole swathes of fans for whom the memory of four-player *GoldenEye* is the only one necessary to cement the N64 as a firm favourite.

NIEL BUSHNELL

The talented artist and animator steps out from the shadows

How did you come to be involved with *Shadow Man*?
I was working in 2D traditional animation in London and looking to move back to my native northeast. I'd heard of Iguana and got in touch. They were keen to grow their animation team and offered to train me to use 3D software, so within a few weeks I was working on *Shadow Man* animating in-game characters and cutscenes. I came on board in the last eight months of the project so most of the design work was in place. I didn't know at the time but coming onto a game in the last six months of development is probably the worst time to join – lots of late nights and working weekends for free, but the team was great.

Was there more creative input from the licence owners?
I wasn't aware of that side of things.

***Shadow Man* received an insane amount of press coverage. Why do you think this was?**
I think this had a lot to do with Guy Miller and Simon Phipps. They were often talking to journalists, bringing them up to look around the studio. They came up with a story about a member of the team who had burned themselves out because of the horror content of the game and had to go away for a long lie down in a medical facility. They managed to create a real buzz around the game.

What was it like working on such an adult-themed game. Did Nintendo have concerns?
I don't recall any issues from Nintendo, we just made the game that felt right. And a lot of it was suggestive horror – lots of things happening in darkness combined with Tim Haywood's soundscape.

What were the hardest things to balance from a technical point of view?
The technical restrictions were a day-to-day problem. The characters had such a low poly count and all of the animation data went through a really harsh compression process where the non-linear information was stripped out. We'd create nice-looking fluid animations that would look clunky in game. It was an exercise in problem-solving, we were always looking for workarounds to fix the issues created by the implementation process. The other big issue was time. When I came on board none of the cutscenes had been animated and there was immense pressure to get them done. Most of them were very wordy and long. We had days to animate what should have taken weeks. The camera in the cutscenes was also a big issue. Instead of having multiple cameras, one for each angle, we could only use one camera throughout, which meant animating it popping over a single frame to the next starting point. Billy Allison came up with a nice script to help with this but it still meant the cameras in the cutscenes were very clunky.

54

CRITICAL ACCLAIM

Always the King Of Controversy, Acclaim was the third-party studio that frequently stole first place

Acclaim was a strong supporter of the N64 throughout its lifetime – not only did it provide a number of exclusives, it was always keen to make use of hardware enhancements like the Controller Pak and Expansion Pak. More importantly, it was an ally that helped to prove that Nintendo wasn't just about family-friendly entertainment, and could offer something to appeal to older demographics. Here are four of the most important games that it brought over to the system…

55

TUROK: DINOSAUR HUNTER 1997

■ Acclaim bought the rights to the comic series to make this game happen, and boy was it ever worth it. *Turok* was a fantastic example of what could be done with the N64 hardware, delivering smooth movement rarely seen in first-person shooters on console. People credit *GoldenEye 007* with proving that consoles could do first-person shooting well, but that's doing a disservice to this game. It was one of the first third-party games out for the system in Europe, and despite an eye-watering price tag it sold an astonishing 1.5 million copies, becoming a key early hit for the machine.

56

EXTREME-G 2 1998

■ It takes a lot for a futuristic racing series to stand out when it shares a platform with a titan such as *F-Zero X*, but Acclaim's *Extreme-G* series managed to do so. This excellent game combines racing on super-fast bikes with shoot-'em-up gameplay, allowing players to dish out punishment as they speed around courses that feature all manner of jumps, loops and other fun features. As well as improved visuals, this instalment boasts better multiplayer thanks to a cool tournament mode, as well as a combat-oriented Battle Arena mode for when you're tired of straight racing action.

57

SOUTH PARK 1998

■ Matt Stone and Trey Parker's cartoon series has been popular for a long time now, but in 1998 it was the hot property on TV – and if you've forgotten how big it was, it's probably worth remembering that *Chocolate Salty Balls* was a number one single that year. Acclaim's first-person shooter adaptation wasn't the hottest game ever, but it was a serviceable effort that proved to be a big Nintendo exclusive that Christmas. What's more, it was *far* better than the awful PlayStation conversion that followed the next year, which was always fun to crow about.

58

SHADOW MAN 1999

■ This is one of the darker N64 games out there, and it's another one of Acclaim's comic book acquisitions. Michael LeRoi is a voodoo warrior, bonded to the Mask Of Shadows by the mysterious priestess Mama Nettie, whose role in life is to protect living beings from the threats that lurk in Deadside. It's one of the most polished action-adventure games on the platform, and one which signifies Nintendo's more open attitude to content on its consoles – you'd never have seen a NES game dealing with the occult and serial killers this way, never mind all the swearing.

59

Darran picks...

GLOVER 1998

■ There are plenty of hidden classics on the N64, but this one is easily my favourite and highlights just how inventive the platform genre could be. The aim of each stage is to use Glover to guide a ball to the level's exit. In addition to running around independently, Glover can punch blocks to break them, guide, throw or bounce his ball and even transform it into different types, each with their own unique abilities. While it appeared on both PC and PlayStation systems, the Nintendo 64 version is clearly superior and even today it holds up incredibly well.

PHILIP OLIVER

The mini-Making Of Glover

Where did *Glover*'s concept originate?
The inspiration came from us trying to create a game based inside a crazy golf course, or adventure golf as they call it in America – actually it was more specifically 'Pirates Cove' in Orlando. We'd visited a few years before on a Summer holiday to Disney World with our parents.

What was the biggest challenge from a technical point of view?
Glover was our first game with full-3D characters with internal rigged skeletons. The graphic engine was build internally from scratch, as was the landscape editor. Characters and backgrounds were modelled in 3D Max and were very low – all coming in at under 100 polygons! Glover, from memory was around 80, although he did have four limbs!

What was the hardest thing to achieve from a gameplay point of view?
The gameplay was unique; there were very few 3D games, and certainly none that tried to tackle guiding a ball around a world. It took a few months to get gameplay that was actually easy and fun to play. It was essentially the first level of *Glover*...

Where did the idea of using different balls originate?
The ability for the ball to change to other size balls with different properties just seemed like a natural fit. Videogames always gave opportunities at which the main character could change his attributes.

Is the Crystal Kingdom featured in the game connected to *Dizzy* in any way?
Only that the concepts in both cases were from the Oliver Twins. *Crystal Kingdom Dizzy* was actually developed by a team at Codemasters and *Glover* was a team at Interactive Studios a few years later. Andrew Oliver was the lead programmer on *Glover.*

Why was the N64 version vastly better than the PlayStation offering?
Glover was designed to exploit the power of the N64's 64-bit floating maths hardware. Therefore maths were a key part of the game. Hasbro asked us to convert it to the PlayStation for the following Christmas (1999). It was tough converting everything to fixed-point maths and rebuilding the levels with more polygons. It took almost a year to do.

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20-Year Anniversary

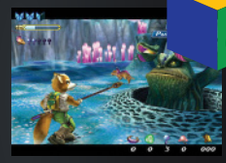
N64'S LEGACY

Great games that wouldn't be here without the N64

The N64 had some fantastic games available for it, but not all of them saw the light of day. Many potentially great games were revealed for the system, but they either fell by the wayside due to publishers and developers losing faith in the console, or realising that the hardware simply didn't have the power to realise their visions. As a result a great many games were either canned outright, or moved across to the GameCube. Here are a few that did make the jump.

STAR FOX ADVENTURES 2002

61



■ Originally known as *Dinosaur Planet*, this was started shortly after *Diddy Kong Racing*. Rare planned it as its last N64 game, but Nintendo had other ideas, asking Rare to retool the game as a new *Star Fox* title for its new GameCube console. It ended up being Rare's last official Nintendo game.

RESIDENT EVIL 0 2002

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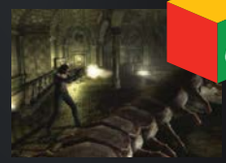


■ Capcom planned its *Resi* prequel as a 64DD release, but changed its mind after seeing how poorly the system was received. It moved to the N64, and received a demo in 2000 at TGS. When Capcom realised its game wouldn't fit on a single cartridge it moved across to Nintendo's GameCube.

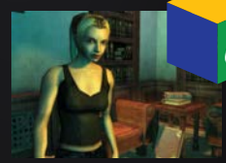
CUBIVORE: SURVIVAL OF THE FITTEST 2002

63

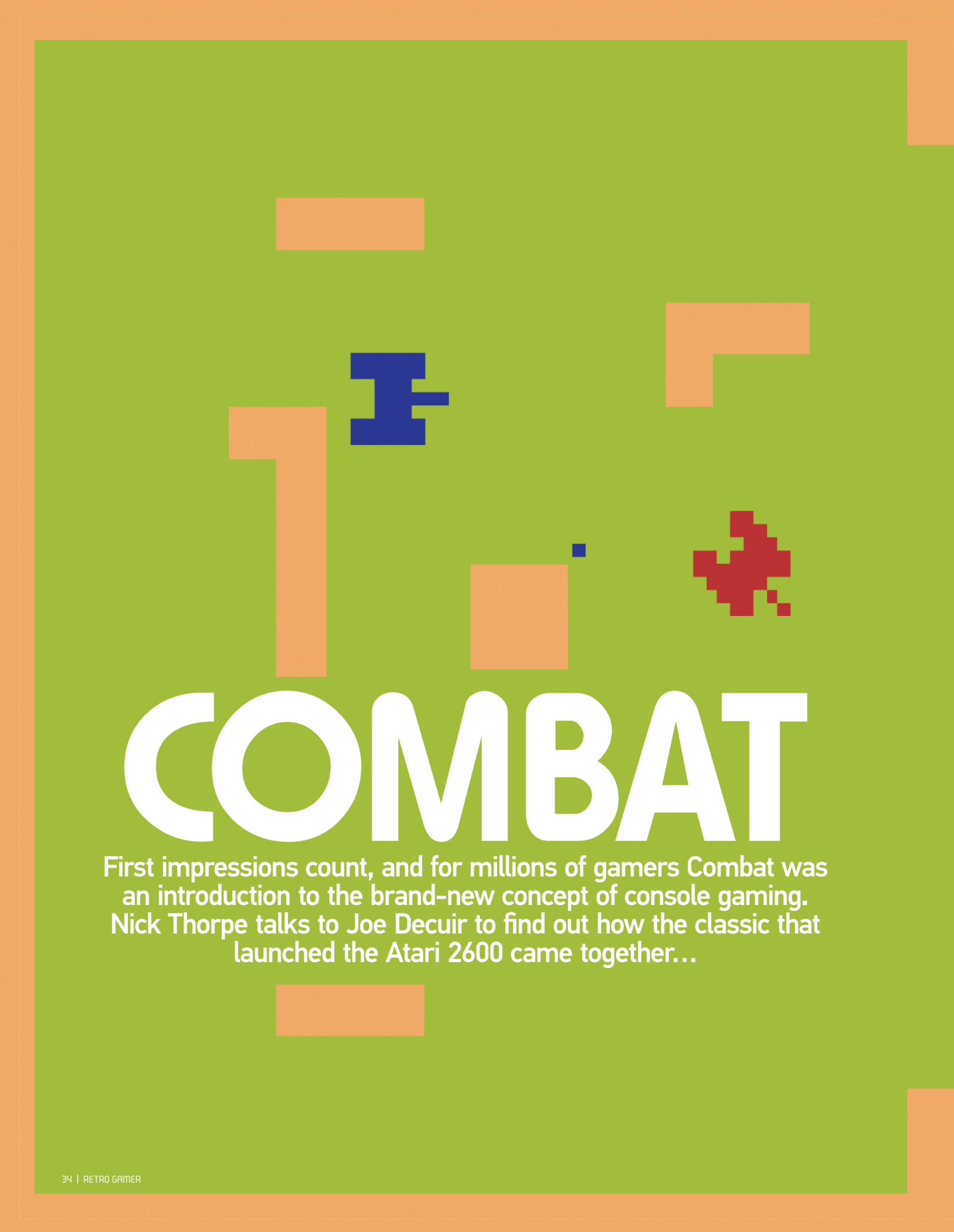
■ This was another game that was slated for the Nintendo 64DD. It was first announced in 2000, but its developers soon changed its mind about continuing work on the N64 and it switched development over to the GameCube. Unlike every other game mentioned here, its N64 roots are still very clear to see.

ETERNAL DARKNESS 2002

64



■ Silicon Knights first revealed *Eternal Darkness* as a N64 game during 1999's E3. Originally planned for a October release the following year, it was eventually moved across to Nintendo's new console, where it received further delays due to the September 11 attack in 2001. It was eventually released to critical acclaim the following year.



COMBAT

First impressions count, and for millions of gamers Combat was an introduction to the brand-new concept of console gaming. Nick Thorpe talks to Joe Decuir to find out how the classic that launched the Atari 2600 came together...

DEVELOPER HIGHLIGHTS

STAR RAIDERS
SYSTEM: ATARI 8-BIT
YEAR: 1979

WARLORDS (PICTURED)
SYSTEM: ATARI 2600
YEAR: 1981

YARS' REVENGE
SYSTEM: ATARI 2600
YEAR: 1982

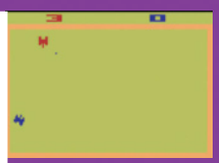
Selling something new to the public is risky. After many months of internal planning, your product seems like the most obvious thing in the world – but nobody on the outside has a clue. Your potential customers will ask you all sorts of questions, from the curious ('What *is* this?') to the sceptical ('Why is it *here*?'), and everything else in between. Trust us when we say that if you don't have good answers to these questions, you won't get very far. In our pre-**Retro Gamer** work, we could only sit by and watch as customer-free days gave way to job losses and eventually repossessions. It's not pleasant. But if you can provide people something they already know within the new product, your burden is significantly lower – the familiar helps to push the unfamiliar.

The development of *Combat* is inextricably linked to the creation of the Atari 2600 itself. In the mid-Seventies, Atari was planning to introduce a brand-new product line. It was already doing excellent business with its arcade machines, spurred by its breakout hit, *Pong*, and had released dedicated *Pong* machines for homes to major success. Complex games were also being released in arcades too, and there was a need to bring these to the home market. Atari's goal was to bring these games into homes, but it faced a problem in doing so – it didn't have a platform for doing so.

The company had a few options. It could continue to manufacture custom hardware for each game, or design a system which connected a custom ASIC (application-specific integrated circuit) to a common set of controls, as Coleco would do with its Telstar Arcade console. The third option, which Atari considered to be out of its reach at the time, was to design a console around a microprocessor with games stored on ROM cartridges. The problem was that most processors of the time were costly – but this changed with the introduction of the 6502 from MOS Technology, which was being offered for just $5 in high-volume orders. Steve Mayer and Ron Milner designed a prototype, and by the end of 1975 Atari was looking for an engineer to finish the machine.

> **"I had learned to play Atari Tank that summer in Disneyland. I was playing with my younger brother, who beat me consistently"**
> Joe Decuir

"I was prepared because I was studying the 6502 on my own before I went looking for a new job," remembers Joe Decuir, the man that Atari hired to take the Atari 2600 – then codenamed Stella – from prototype to finished product. "I was prepared as a user because I had learned to play *Atari Tank* that summer in Disneyland. I was playing with my younger brother, who beat me consistently," he adds. Those losses would prove to be valuable experience. "After the interview at Atari, they took me to play a game or two. Realising I was about to be tested, I gravitated to *Tank*, and played a passable game. I was hired on the spot."



COMBAT 101

■ *Combat* is a military-themed competitive shooting game, in which two players compete for the highest score by shooting each other while avoiding getting hit. Gameplay takes place in tanks, biplanes and jets, and the game's rules may be modified to provide battlefield obstacles, visual obstructions and alternative missile properties.

Joe's first task was to debug the prototype machine and demonstrate its ability to play a tank game. "A tank game was an original marketing requirement for the system. The game was an acceptance test for the hardware, so it was codeveloped," he explains. It makes sense – Atari was planning to sell its new console concept with a popular arcade staple. "But it was a huge challenge. Can we do a game like this on simple cheap line-oriented hardware? We knew, from watching Moore's Law in action, that our competitors would come out with a frame buffer design." The new processor was key to this. "Atari had been pioneering arcade games. We knew that we needed a few relatively high resolution objects (players) and a low resolution background (playfield)," Joe recalls. "The 6502 was fast enough to do the job."

It seems bizarre, in hindsight, given the massive success and long life that the Atari 2600 enjoyed, but Atari was massively concerned with beating those competitors to the punch. The company estimated that if the machine succeeded at all, it would have a maximum shelf life of about three years before a new, more capable system would be needed to compete with the frame buffer-based consoles it anticipated. Speed was of the essence.

"Working for Steve Mayer and Ron Milner, I got the original prototype working at Cyan Engineering," Joe continues. "We invited Nolan Bushnell and Al Alcorn to visit. We showed them proof that the hardware worked, and they rearranged Atari to devote resources to complete the job. One of them was to hire Larry Wagner and his team." The initial job hadn't taken long – it was February of 1976, and the display technology (or Television Interface Adapter) was already functioning. Larry Wagner was put in charge of building a software library for the system, and was responsible for hiring and managing the first wave of Atari 2600 programmers. Joe was moved out to Los Gatos, California and worked under the experienced hardware designer Jay Miner. Jay would take on the ASIC design, and Joe would tackle the rest of the hardware.

But what would become of Joe's tank game? Larry joined in on that, and helped to shape it into the game we know today. "It overlapped hardware development," Joe remembers. "That started in December 1975. *Combat* was ready to ship in winter 1977. However, the duty cycle was low, because both of us had other responsibilities." It was an odd situation – one of the key requirements for the system had suddenly become a project that coexisted alongside the other priorities of the two people working on it. Joe was also working on another game, the *Pong*-based *Video Olympics*, and still working on hardware. Larry was in charge of the programmers. However, there was no way around it – the game would continue, but at a relatively slow pace.

> **"We invited Nolan Bushnell and Al Alcorn to visit. We showed them proof that the hardware worked, and they rearranged Atari to devote resources to complete the job"**
>
> Joe Decuir

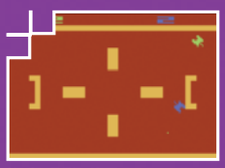
Combat soon evolved beyond a simple conversion of the arcade *Tank* game, to reflect developments from within Atari's arcade division. "They were shipping a tank game," Joe remembers. "They were also thinking about a jet game and a biplane game." Joe would incorporate these into the new Atari 2600 game. These would provide game variations for home players, and functioned differently to the tanks in practical terms. Where the tanks were slow, restricted by the screen boundaries and could use walls for cover, the planes were faster and could leave the edge of the screen to reappear on the other side. While walls wouldn't make sense, clouds could be used for cover.

What's more, the planes could also fly in squadrons. As Joe worked on the hardware, he knew that sprites had properties that could be exploited to provide game variations. The multi-plane modes made use of the fact that the 2600 was capable of cloning sprites up to three times on a horizontal line. However, it was another trick that provided one of the game's most interesting modes – biplanes versus the bomber. One player controls a formation of three biplanes that shoot together, and the other has control of an aircraft with a single large missile.

"We were thinking about how to create variations that were interesting, and provide handicaps," says Joe. "In the games with one bomber and three biplanes, the three biplanes are a different target than the bomber." This was an early example of asymmetrical design in competitive videogames, providing players with different tools to achieve the same goals – a forerunner to the kinds of choices we make today whenever we select a character in a fighting game or a car in a racing game. This wasn't the only way that players were able to affect handicaps, as the system's difficulty switches were used in *Combat* too. If handicapped, a player's tank will be slower to turn and have a shorter firing range.

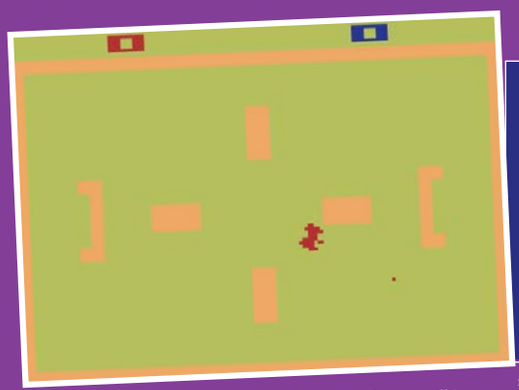
Speaking of symmetry, you may have wondered why the game's stages are symmetrical – mazes mirrored from left to right, and likewise two clouds in the aerial combat stages. The answer lies in the design of the hardware. The console produces a playfield in which the right side if a mirrored duplicate of the left. That too was Joe's work. "I developed the engine, including the tanks, jets and biplanes, and the weird modes (e.g. 3:1)."

And what of codeveloper Larry Wagner? "Larry inherited the basic design, and added a lot of features and modes," Joe explains. These ensured the longevity of the game in the home market, as the final cartridge had a total of 27 game variations to try. Every player will have had a favourite, and some proved to be particularly interesting in design terms.

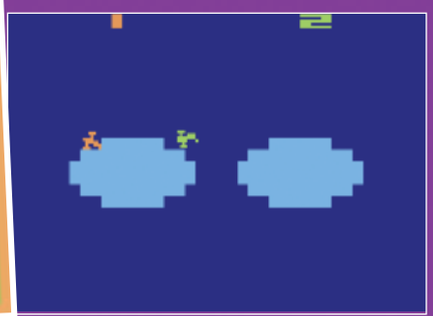


IN THE KNOW

- **» PUBLISHER:** Atari Inc
- **» DEVELOPER:** Atari Inc
- **» RELEASED:** 1977
- **» PLATFORM:** Atari 2600
- **» PLATFORM:** Shoot-'em-up



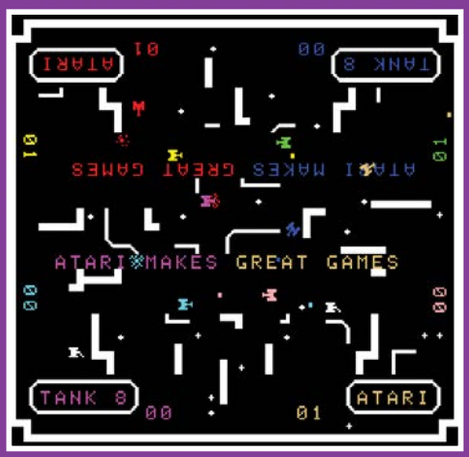
» [Atari 2600] Invisible Tank mode allows you to do some pretty stealthy stuff, unless you're terrible and bump into walls a lot.



» [Atari 2600] You can hide in the clouds for temporary cover, remember that your plane is constantly moving forward, though.

MODERN COMBAT

Tank games have been popular for 40 years – here are some with a multiplayer focus…



TANK 8

1976

■ The successor to the game that inspired *Combat* was geared towards total carnage, supporting up to eight players. Like the original *Tank*, it was released by the Atari subsidiary Kee Games, and it improved on its predecessor with full-colour graphics to differentiate between each of the eight players.

ARMOR AMBUSH

1982

■ M-Network's tank battle game was an Atari 2600 conversion of the Intellivision game *Armor Battle*, and provided an advanced take on the theme for players who had mastered *Combat*. New ground surfaces affected tank handling and visibility.

TOKYO WARS

1996

■ After years of single-player arcade tank games that followed in the wake of *Battlezone*, Namco's blaster utilised networked cabinets to bring multiplayer tank battles back to the arcade. *Tokyo Wars* allowed up to eight players to compete in team battles.

ALIEN FRONT ONLINE

2001

■ Sega's sci-fi tank battler pitted humans against aliens across the world with Earthlings using conventional tanks and aliens using walkers. For the first time on console, players could compete over the internet thanks to the Dreamcast's built-in modem.

WORLD OF TANKS

2010

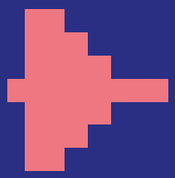
■ The tank battles of the 20th Century provide the inspiration for *World Of Tanks*, which features hundreds of real-world models from World War I to the early Sixties. This game is one of the most popular on the planet right now due to its free-to-play model, making a fortune for its publisher.

MIX AND MATCH

Combat has 27 game modes – here are the features that show up in each of them...

TANKS
MODES: 1-14

BIPLANES
MODES: 15-20



JETS
MODES: 21-27

OPEN FIELD
MODES: 1, 8, 10, 13, 18-20, 23-24, 26

SIMPLE MAZE
MODES: 2-3, 6, 9, 11-12, 14

COMPLEX MAZE
MODES: 4-5, 7

CLOUDS
MODES: 15-17, 21-22, 25

INVISIBILITY
MODES: 10-14

REBOUNDING MISSILES
MODES: 6-9, 12-14

STRAIGHT MISSILES
MODES: 3, 5, 16, 20, 22, 24, 27

GUIDED MISSILES
MODES: 1-2, 4, 10-11, 15, 19, 21, 23, 25-26

MACHINE GUN
MODES: 17-18

» [Atari 2600] Each pair of planes is controlled by one player, and flies in formation.

TWO LATE

How Combat's sequel managed to disappear for over a decade...

Neither Joe nor Larry were involved in the production of *Combat Two*, which was developed by General Computer Corporation in 1982. This sequel stripped back the number of options available, removing the likes of invisible tanks, biplanes and jets, instead focusing on making the main tank game more complex and interesting by adding a variety of new mechanics. Instead of the maze-like arenas of the original game, *Combat Two* offered a realistic battlefield featuring a forest or walls to provide cover, a river and bridges to cross it. Each player could also access missile bases, which gave access to a supply of homing missiles. Instead of a score-based game, both players had three lives and a supply of armour. As before, the game was multiplayer-only.

Combat Two didn't make it to production during the lifetime of the Atari 2600. The game ran into the North American video game crash of 1983 and wound up cancelled, with its part number reassigned to *Road Runner*. The game didn't end up being manufactured on cartridge until 2001, when a run of copies was created for sale at the Classic Gaming Expo. The game finally got an release in 2005 when it was included on the Atari Flashback 2 console, ending over two decades without an official release.

One of Larry's new modes, Tank Pong, took the basic game and added bouncing missiles by using the knowledge of bouncing projectiles gained from *Pong*. With the basic maze structure in place, players could perform trick shots that allowed hits from locations that would be impossible in the regular game by firing around corners. In fact, some variations absolutely required this – missiles were harmless unless first armed by being bounced off a wall.

Another interesting mode was Invisible Tank. To add extra depth to the game, both players would be concealed at all times except for when firing or hitting a wall. A hit would register whether the opponent was visible or not. This allowed for stealth attacks, with players creeping up on the suspected location of their opponent – if both were restrained with their shots, it could be a very tense experience that relied as much on navigational skill as ability. In some ways, it was both a way of working around the limitations of a top-down view and a precursor to the stealth-based games of today – after all, you could hear a tank firing from behind a wall, but you might not necessarily see it.

> **"The early tank variations were fun for me, because the missiles were steerable after you made the shot"**
>
> Joe Decuir

Other game variations included guided and unguided missiles (as well as machine guns for the biplanes), fast and slow modes, and different maze layouts. 14 of the game's 27 variations were tank-based, with the remaining 13 comprised of biplane and jet games. We were rather curious to know which of these Joe preferred. "The early tank variations were fun for me, because the missiles were steerable after you made the shot," he notes. This ability to curve your shots was key to making even the open-field mode enjoyable – without any cover, it's key for players to avoid straying into the direct line of fire while steering their own missiles into opponents.

Of course, the final key component of *Combat* was an opponent. As was common at the time, *Combat* was a multiplayer-only game. Apart from being a key part of the arcade game design, this was necessitated by the technological limitations that the developers had to work with. "We had 2K of ROM," notes Joe. "The interesting problem would be: what does the machine player do? I did put a single player *Pong* variant in *Video Olympics*. The simple intelligence: the machine moves up or down to meet the ball, but at a limited speed. To beat it, the live player has to bounce the ball off a wall so that the ball changes direction and moves up or down faster than the machine player can track. The algorithm is very simple." *Combat* was a lot more complex than *Pong* – the computer player would have to track the player, have instructions on how to move towards them, and know when to fire, as well as having imperfections in order to ensure that the challenge was fun. Cramming all of that into 2,048 bytes would have been too much.

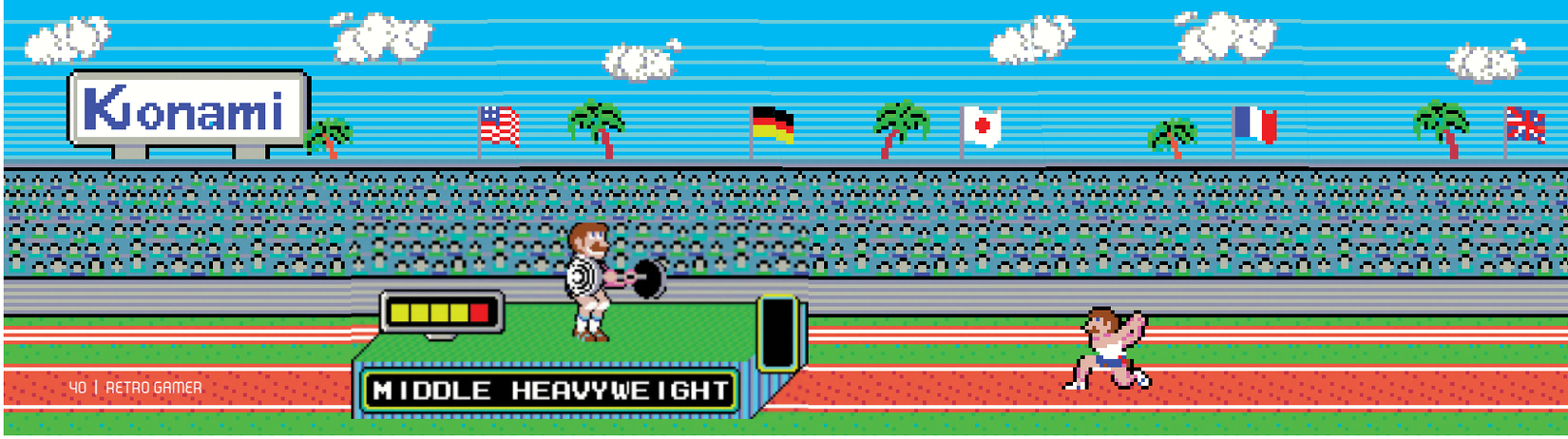
When *Combat* was finished, it was designated as the pack-in game for Atari 2600 consoles. It was a perfect fit – the concept was familiar and thus easy to grasp, whether you'd played the arcade game or not. The console had the product number CX2600, and as its first game *Combat* was CX2601. For Sears, which was marketing the system under the Telegames label, the game was renamed *Tank Plus* (alluding to the arcade game) but wasn't included in the main package – *Video Olympics*, Joe's other game, was included instead as Pong Sports. However, with the majority of consoles being sold under the Atari brand, *Combat* became one of the most commonly-found cartridges for the console. The game would remain packaged with the system for five years, eventually being usurped in 1982 by *Pac-Man*, meaning that millions of cartridges will have made their way into the hands of gamers.

For Joe, Larry and Atari, *Combat* had been a successful endeavour – the Atari 2600 was out in the wild and *Combat* was exactly what the machine needed to accompany it. The game communicated the fact that the system was capable of more than just *Pong*, and could provide home versions of arcade hits. The system sold 250,000 units in 1977, and would eventually go on to sell 30 million units by the time production stopped in the late Eighties. That's certainly not a bad run for a machine that was only meant to last three years, and *Combat* was a key part of making that happen.

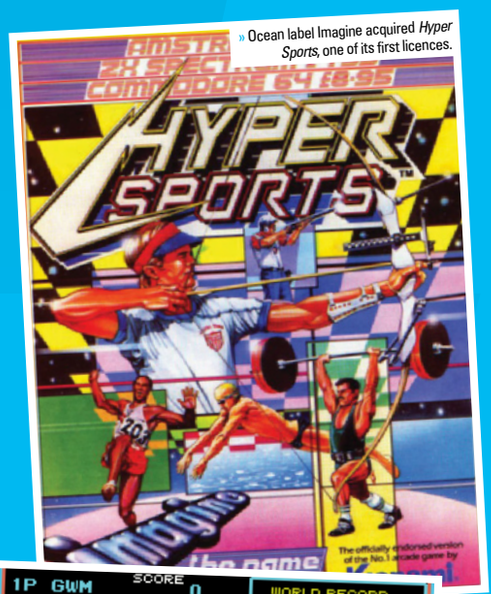
But if the game itself was a victory, defeat was not far behind. "At Christmas 1977, I bought a 2600 myself and brought it home to my family," Joe recalls in closing. "I had contributed to the system design and the *Combat* cartridge. However, my younger brother was still a better player."

HYPER SPORTS

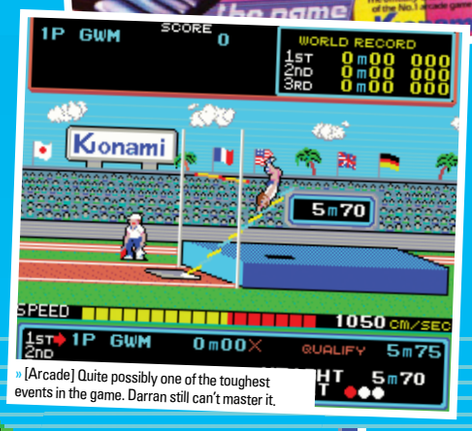
One of the finest in a new generation of joystick wagglers, Hyper Sports not only tested wannabe sports stars' skills but also their endurance. Many buttons were mashed and joysticks broken to bring you this ultimate guide...



HYPER SPORTS



» Ocean label Imagine acquired *Hyper Sports*, one of its first licences.

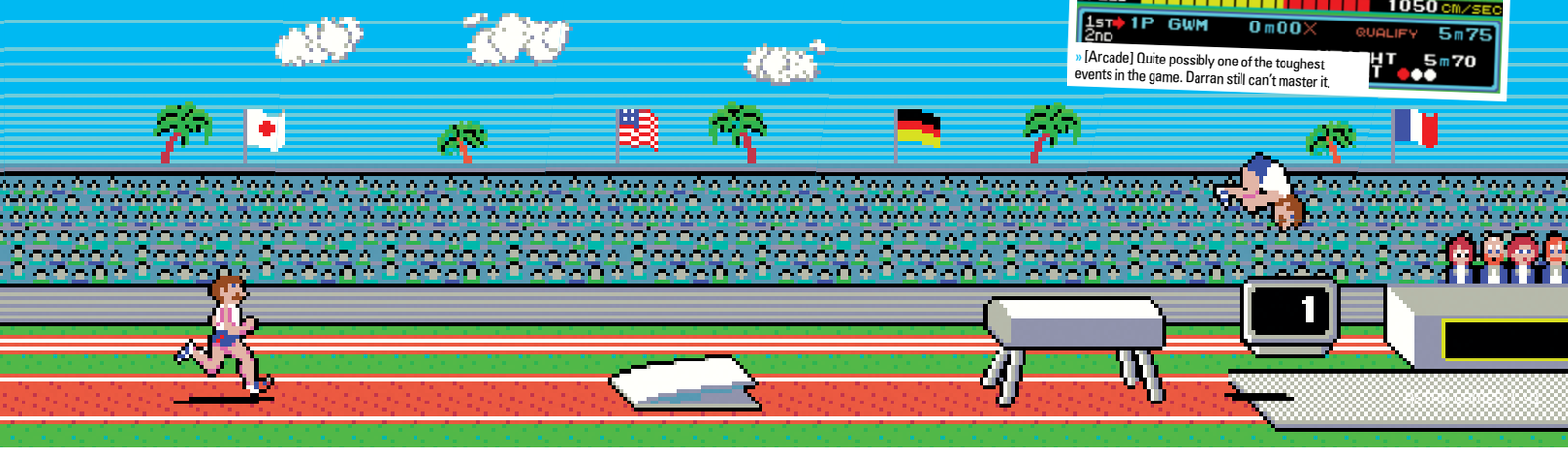


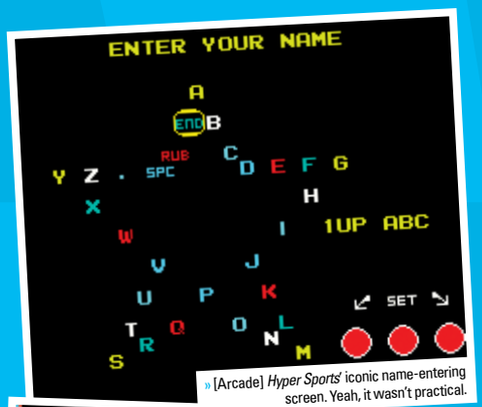
» [Arcade] Quite possibly one of the toughest events in the game. Darran still can't master it.

Unlike the majority of videogames, it isn't just eyestrain that's a side-effect of playing Konami's *Track & Field* follow-up, *Hyper Sports*. Repetitive strain injury, broken joysticks, aching fingers and an unforgettable attraction to Debbie Greenwood, the presenter of Eighties quiz show, *First Class*, are all the results of exposure to this multi-event extravaganza.

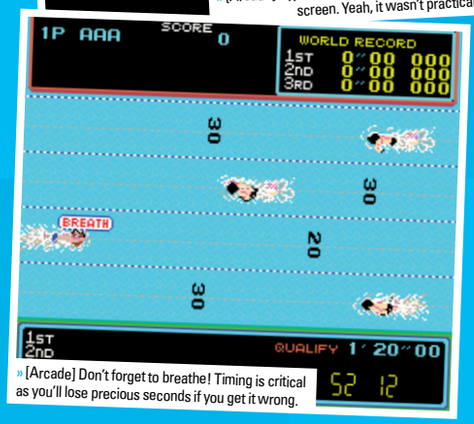
It is with 1983's *Track & Field* that the Olympic events style of gameplay first started to become popular. *Track & Field* contained six events, from the basic 100m dash, to the health and safety nightmares of the hammer and javelin throw. Each event involved a rapid tapping combination of two buttons (usually to gain running speed) and a third action button that determined other vital factors such as angle or jump timing. Known in Japan as *Hyper Olympic*, *Track & Field* was a huge hit, its simple, intuitive gameplay and multiplayer competitiveness key elements to its success. Konami wasted little time in turning around a sequel, scheduled to reach arcades around the same time that the 1984 Summer Olympics in Los Angeles were due to take place. Logically referred to in its home country as *Hyper Olympic '84*, the game was retitled to the snappier *Hyper Sports* for the rest of the world and distributed under a licence in the arcades by Centuri Inc..

Developed in-house, the arcade giant wisely changed little of the addictive gameplay that had made *Track* ▶





» [Arcade] *Hyper Sports*' iconic name-entering screen. Yeah, it wasn't practical.



» [Arcade] Don't forget to breathe! Timing is critical as you'll lose precious seconds if you get it wrong.

▶ *& Field* so popular. *Hyper Sports* retains the three-button setup and multiplayer; up to four players can take part and each event contains a qualifying level set by the game, which is either a time, score, or an adjudged award. What did change was the events themselves, and these became more varied and fun than in *Hyper Sports*' predecessor. Success in each event propelled the player into the next test, until the contestant was crowned an Olympic champion.

First up, it's on with the Speedos and into the pool for a quick swim. The player is required to traverse two lengths within a certain time, utilising the rapid mashing of buttons to get that front crawl going. It isn't all about pace, however; at regular intervals the swimmer will need to come up for air and tapping the action button at just the right moment ensures a smooth passage across the pool. Hit the action button too late or too early, and you are stranded in the middle of the pool, scratching your head and wondering where it all went wrong.

Next up is possibly *Hyper Sports*' most famous event. Skeet Shooting has the player in charge of a powerful rifle as clay pigeons fly in from the left and right hand side of the screen. Timing is key here as each clay pigeon can only be downed as it passes through one of two reticules. From this point on, things begin to get trickier, starting with the resolute steed of the long horse event. Here, fingers get a brief rest as the game takes over the initial running speed. It's the player's job to time the jump onto and over the horse and

> **"We were fully aware of the arcade game and we had a cabinet in the office"**
> Richard Kay

then rotate as many times as possible before landing. Anything else results in an embarrassing roll right in front of the withering glare of the panel of judges.

The final four events continue to combine the skills of timing and endurance. After selecting wind speed, Archery presents an overhead viewpoint and a somewhat unfairly moving target (which we don't remember from any bow-based competition we've ever seen). Depressing the action key at the correct moment determines the height of the arrow. Triple Jump, possibly the toughest of the seven events in terms of timing, relies on the player controlling the angle of each jump, while Weightlifting is an endurance test as the player builds up power before pressing the action button at the correct time in order to raise the weight. Finally, Pole Vault sees the player briefly run and using the action button to place the pole in the correct place

WE ARE THE CHAMPIONS

Some more notable games from the Track & Field series

TRACK & FIELD

ARCADE (1983)

■ The original breakout hit. A style of gameplay that was unrealised at the time, and it included a competitive format that was tailor-made for the arcades. *Track & Field*'s multiple events may not have been as diverse as *Hyper Sports*' but it remains an important slice of gaming history. Today, it sits on the back benches, glancing over its storied legacy.

HYPER SPORTS 2/ HYPER SPORTS 3

MSX (1984), (1985)

■ Not really true sequels, as they were released in the same year as *Hyper Sports* on the MSX. The first sequel included three of the original events in skeet shooting, archery and weight lifting while *Hyper Sports 3* included the triple jump and pole vaulting and two new events, cycling and (somewhat oddly) curling.

KONAMI '88

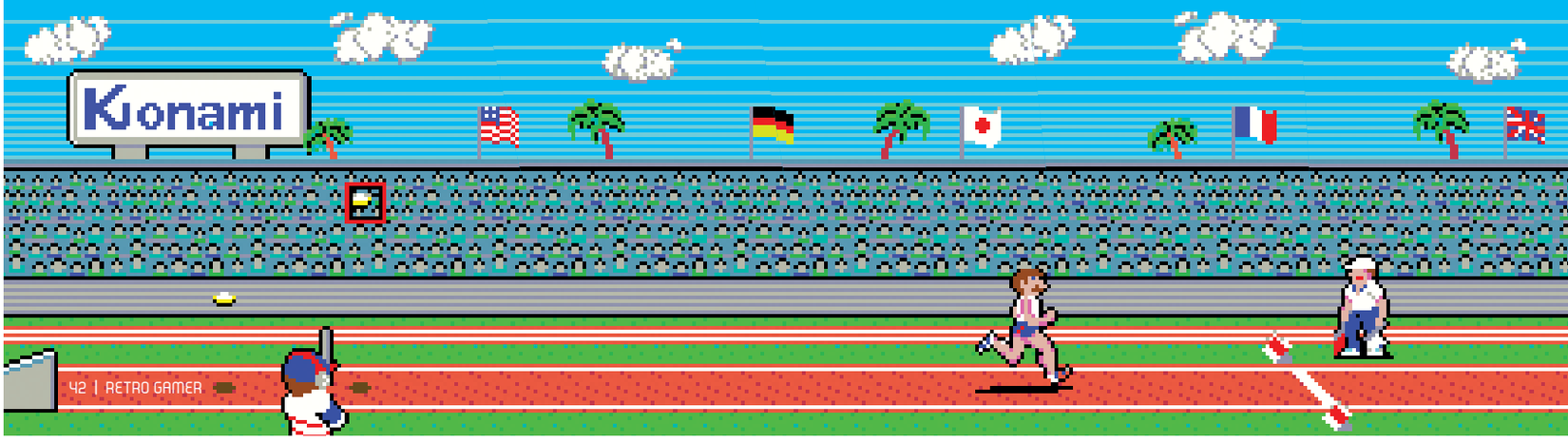
ARCADE (1988)

■ Known also as *Hyper Sports Special*, *Konami '88* is loosely based on the summer Olympics in Seoul of that year. Given the four interim years, graphics were much improved, although the colourful cartoon style did not please everyone. Multiple events and angles of presentation make it a varied effort. It, again, lacked the original's basic playability.

INTERNATIONAL TRACK & FIELD

ARCADE, PLAYSTATION (1996)

■ A full-3D update of the original 1983 game, *International Track & Field* was released in arcades (in Japan only) as *Hyper Athlete* and featured all six events from the *Track & Field* plus three more from *Hyper Sports*. The game was released almost simultaneously on the Sony PlayStation as well as the arcade.



» [Arcade] Scoring a bull's-eye yielded a compliment from the judges.

» [Arcade] The Pole Vault event is notoriously difficult to master.

» [Arcade] Perform well and you too can reach this position on the podium.

in order to guide themselves over the bar. Like in real life, it's trickier than it sounds.

As with *Track & Field*, *Hyper Sports* was an upright cabinet with a horizontal screen displaying a resolution of 256x224. It also suffered from the predictable problem that had plagued the earlier game: worn down from a frequent and punishing hammering, *Hyper Sports*' buttons required constant replacement by arcade owners. The game's popularity was boosted when two of its events (Skeet Shooting and Pole Vault) featured on the BBC children's quiz show, *First*

INTERNATIONAL TRACK & FIELD 2000

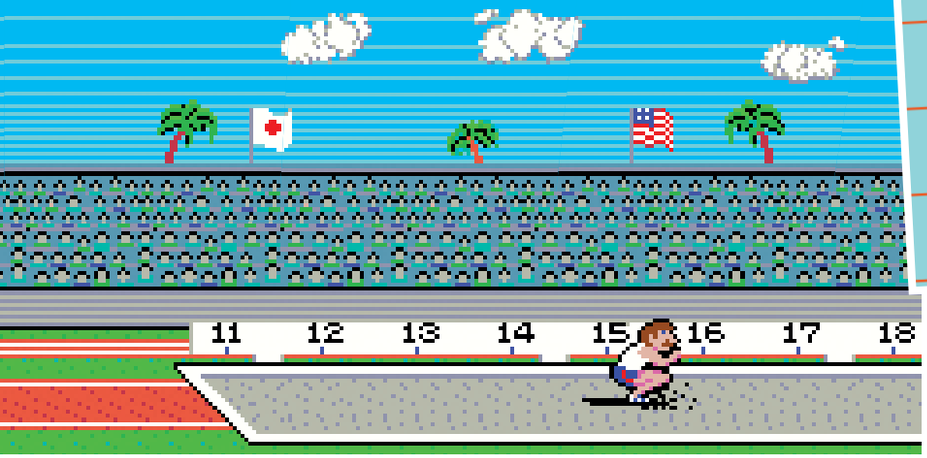
N64, VARIOUS (1999)

■ After missing out the Super Nintendo, *Track & Field* finally saw action on the Nintendo 64, in addition to the Sony PlayStation. The now-familiar events were given a makeover, complete with commentaries and realistic graphics. There is an updated version for the PS2 and Dreamcast complete with ESPN licence.

NEW INTERNATIONAL TRACK & FIELD

NINTENDO DS (2008)

■ This well-received title for the Nintendo DS utilised the stylus to change the way the gameplay worked (although the D-pad could still be used if you wanted to keep things similar to the original game). There were now a mammoth 24 events to compete in, including many from the original *Hyper Sports*.



DEVELOPER Q&A

We speak to Richard Kay, author of the excellent BBC conversion of Hyper Sports

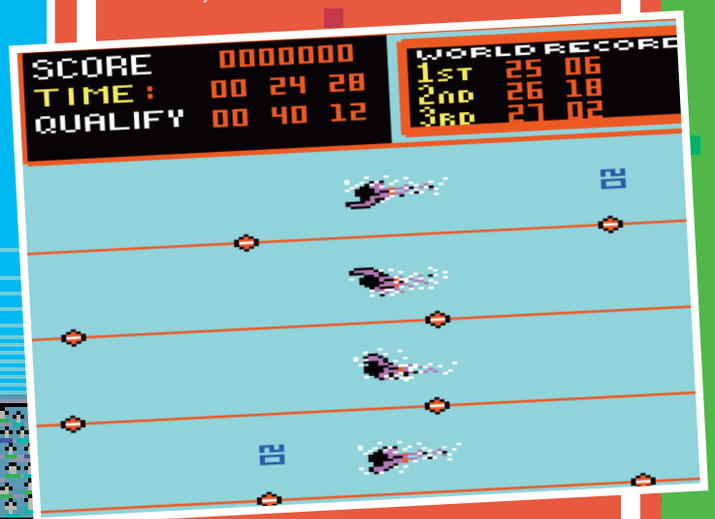
How and when did you start working at Ocean?
I joined Ocean – which was then named Spectrum Games – in 1982 as a box packer. I hadn't originally joined as a programmer, but taught myself assembly language at home and secretly wrote *Mr. Wimpy* for it on the BBC Micro. I became its main in-house BBC coder, although it had third-party developers such as Kevin Edwards. I also coded *Hunchback* on the Amstrad.

Were you aware of the arcade version of *Hyper Sports* and if so what did you think of it?
We were fully aware of the arcade game and we had a cabinet in the office. For its time it was a great game to play and gave you muscles in your hands and arms you didn't know you had!

What problems did you encounter getting the game from the arcade to the BBC Micro hardware?
One of the major issues was the amount of space that was required for each of the levels. Just to get one level to fit in was a job in itself, so I had to use every trick in the 'developers' book to squeeze it in, one being to shrink the screen size so that I could store the images in the hidden part of the screen. The main technique that I used was to load each level separately. Processing power itself was not an issue on the BBC, and often you would have to create big delay loops to slow it down.

Were you satisfied with the end result?
Considering the arcade machine was designed for the game I was very happy with the end result. The fact it went to number one in the BBC charts at Christmas was probably the best endorsement I could have.

You left Ocean soon afterwards. What happened?
I left Ocean because I never received the same salary as the other coders because I never managed to shake off the 'warehouse packer' tag despite doing the same job as them. After proving myself and working countless hours in creating the games I decided enough was enough. I did eventually start my own development company [Software Creations] which became one of the biggest independent around with huge success working directly with Nintendo for several years.



» [BBC Micro] *Hyper Sports* had plenty of great conversions, and Richard Kay's BBC Micro port is one of them.

CONVERSION CAPERS The best and worst Hyper Sports ports

AMSTRAD CPC

■ As with the Spectrum version, the Amstrad lacked the Pole Vault event. Sadly that's not all it lacked, as it's one of the poorest home iterations of *Hyper Sports*. Indistinct graphics, jerky scrolling and some bizarre design choices don't help and the programmers somehow even managed to squeeze all the fun out of skeet shooting. It has all the signs of a rushed port.

BBC

■ Despite some weird-looking colours and rather arthritic-looking athletes, this is actually a commendable effort by Richard Kay to translate the thrills of the hit arcade game to the humble Acorn computer. The game moves at a fair pace and there are some crunchy sound effects, including a recreation of the famous *Chariots Of Fire* theme.

COMMODORE 64

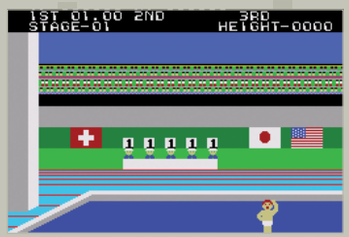
■ This is more like it. Undoubtedly the best of the home computer translations of *Hyper Sports*, this version, coded by David Collier and with superb sound from Martin Galway is a smooth, challenging and playable port that looks the business, too. Skeet Shooting is a particular delight despite a smaller play area, but the whole game looks and plays very professionally.

MSX

■ It's pretty hard to recommend the MSX version on the basis it only contains four events, but as two of them are different from the arcade original, it's a bit of an anomaly nonetheless. The focus is firmly on the spinning mechanic as the new events, Diving and Horizontal Bar, require multiple spins to get the required score. Fine graphically, but all very peculiar.

NES

■ Now here's a strange beast. The Nintendo console does a fantastic job of replicating three of the arcade's events, and a new one in High Jump (which is just a slightly amended take on Pole Vault). But that's it – just four events, and we're pretty sure fans must have felt a bit short-changed back in the day, despite the high quality of what *is* there.



SG-1000

■ This version of *Hyper Sports* is pretty much identical to the MSX version, with different controls. Diving, Long Horse, Horizontal Bar and Trampoline are the four events, and once more the emphasis is firmly on how many spins you can perform to impress the panel of judges. And, bizarrely, the diver looks like he is wearing a nappy, rather than Speedos.

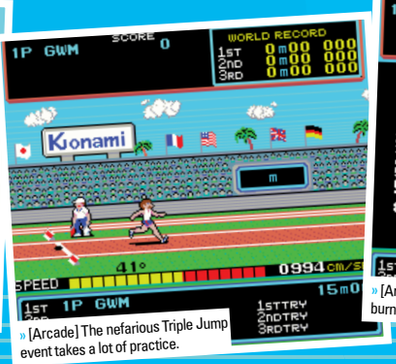
SHARP X-1

■ The Japanese computer struggles quite a bit with the fast pace of *Hyper Sports* and there are a number of compromises present as well. There are only three swimmers present and four events in total, there is plenty of flickery graphics on each event, too. We'd go out and say that this one is for the completionists and *Hyper Sports* aficionados among you only.

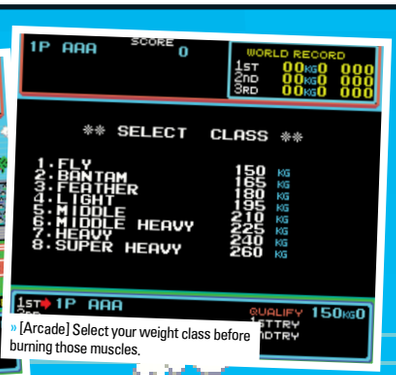
ZX SPECTRUM

■ Programmed by Jonathan 'Joffa' Smith, the ZX Spectrum version may have been graphically inferior to its arcade parent, but it lacked nothing in terms of gameplay and is considered by many to be better than Ocean's own legendary *Daley Thompson* series of games. It lacked the Pole Vault event, but was otherwise an excellent conversion and a deserved *Crash* 'Smash'.

» [NES] Konami's NES port was created in-house.



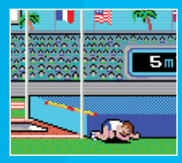
» [Arcade] The nefarious Triple Jump event takes a lot of practice.



» [Arcade] Select your weight class before burning those muscles.

» [Arcade] The victory screen, accompanied by the music from *Chariots Of Fire*.

▶ *Class*. Series one of the programme featured only Scottish schools and was presented by Louise Bachelor. In 1987, it was given a fresh host in Debbie Greenwood, and new arcade games for contestants to compete in. After earlier featuring the 100-metre sprint and hurdles from *Track & Field*, the inclusion of two more events from its sequel was a logical move by the show's producers. Subsequently, a substantial Friday-night audience helped not only the arcade machine, but also sales of the home conversions of *Hyper Sports*.

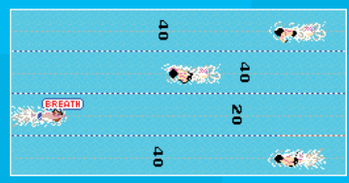


The European home computer conversions of *Hyper Sports* were handled by Manchester's Ocean Software under the guise of its newly-acquired label, Imagine. Imagine had initially begun life as a publisher of sports-related games and, in 1985, *Hyper Sports* became its tent-pole release in this respect, eclipsing Ocean's own joystick waggler, *Daley Thompson's Decathlon*. Konami itself developed the Famicom, Sharp X-1 and MSX ports (the latter featuring only four events) while there was also a version on early Sega console, the SG-1000, developed by Sega itself, and a mirror image of the MSX version. The majority of the home conversions replicated the playability and fun of the original arcade game, causing a great number more sore fingers and broken keyboards.

Having sprinted in on the coattails of *Track & Field*, *Hyper Sports* milked the applause of its famous forebear, and was none the worse for it. The game unfortunately arrived just as the infamous videogame crash was hitting the US, hence the lack of native American ports, yet was popular enough in both its home country and Europe to ensure there would be a steady stream of weary fingers for many years to come. Get ready…go! ✱

BE A RECORD BREAKER

How to beat each of Hyper Sports' seven events

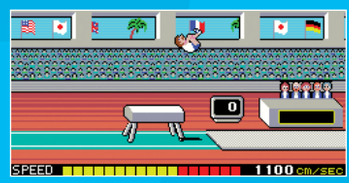


SWIMMING

■ Don't go too early as you'll be pulled up for flying – do this twice and you lose a life. Once in the pool, the key is timing your breathing. With practice, a seasoned player can anticipate when the breath icon appears on the screen, obtaining a vital lead in the race.

SKEET SHOOTING

■ Quick reactions are needed here, but the skeets tend to be released in a similar pattern. Shooting them consecutively results in your reticules growing in size (increasing the hit box) but the skeets fly quicker. Stay cool, and don't forget the bird at the end for a bonus 3,000 points.



LONG HORSE

■ It's an automatic run, so concentrate on timing your jump. Try to wait until you are right at the end of the springboard before pressing the action button as this will land you on the end of the horse. Then tap away to perform those spins, but make sure you land on your feet!

ARCHERY

■ The ideal angle to shoot at is around 5° and the key thing to remember here is to be patient as it's very easy to fall in the trap of firing too early. Getting a perfect score (all 'nice') will give you the opportunity for further bonuses including the chance to hit an apple.

TRIPLE JUMP

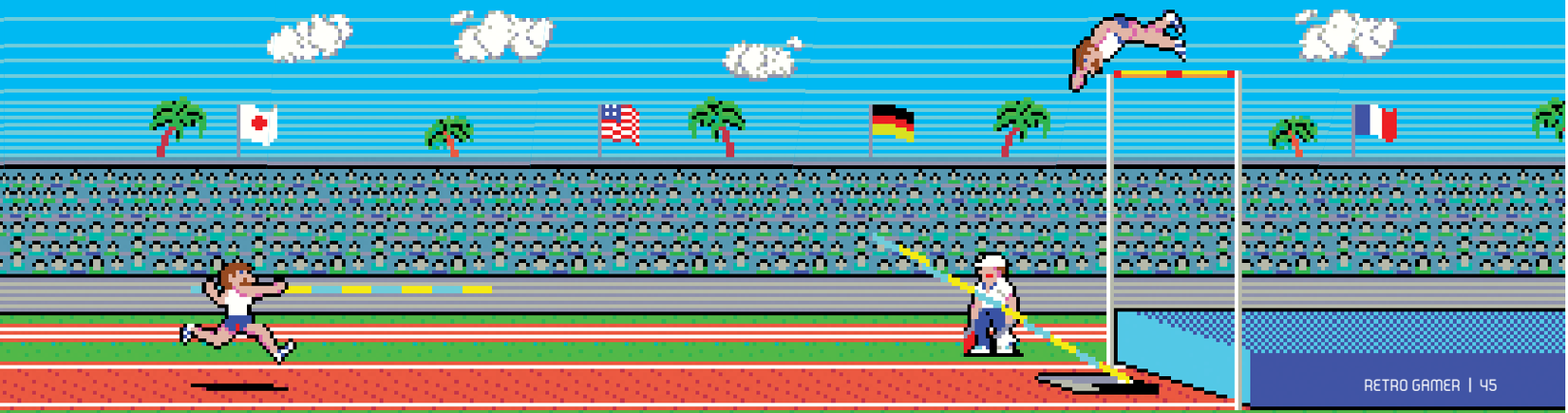
■ It may sound simple, but this is possibly the trickiest event to get right at first. Each jump must be a certain angle in order to propel the player forward. The ideal angle is 35°, followed by 41° and 45° for the second and third jumps.

POLE VAULT

■ As with Long Horse, the aim is to land the pole as close to the end of the springboard (or trap in this case) as possible. Keep holding the action button as you rise into the air and release when near the top of the bar to sail over. Hopefully.

WEIGHTLIFTING

■ This one marks a return to the button mashing. After choosing your weight level, repeatedly tap the run buttons like your life depends on it to get your character's power up. Then, at the right moment, hit the action button to raise the bar above your strongman's head.



Karateka

KICK, PUNCH, IT'S ALL IN THE MIND

RETROREVIVAL

» PC » BRØDERBUND » 1984

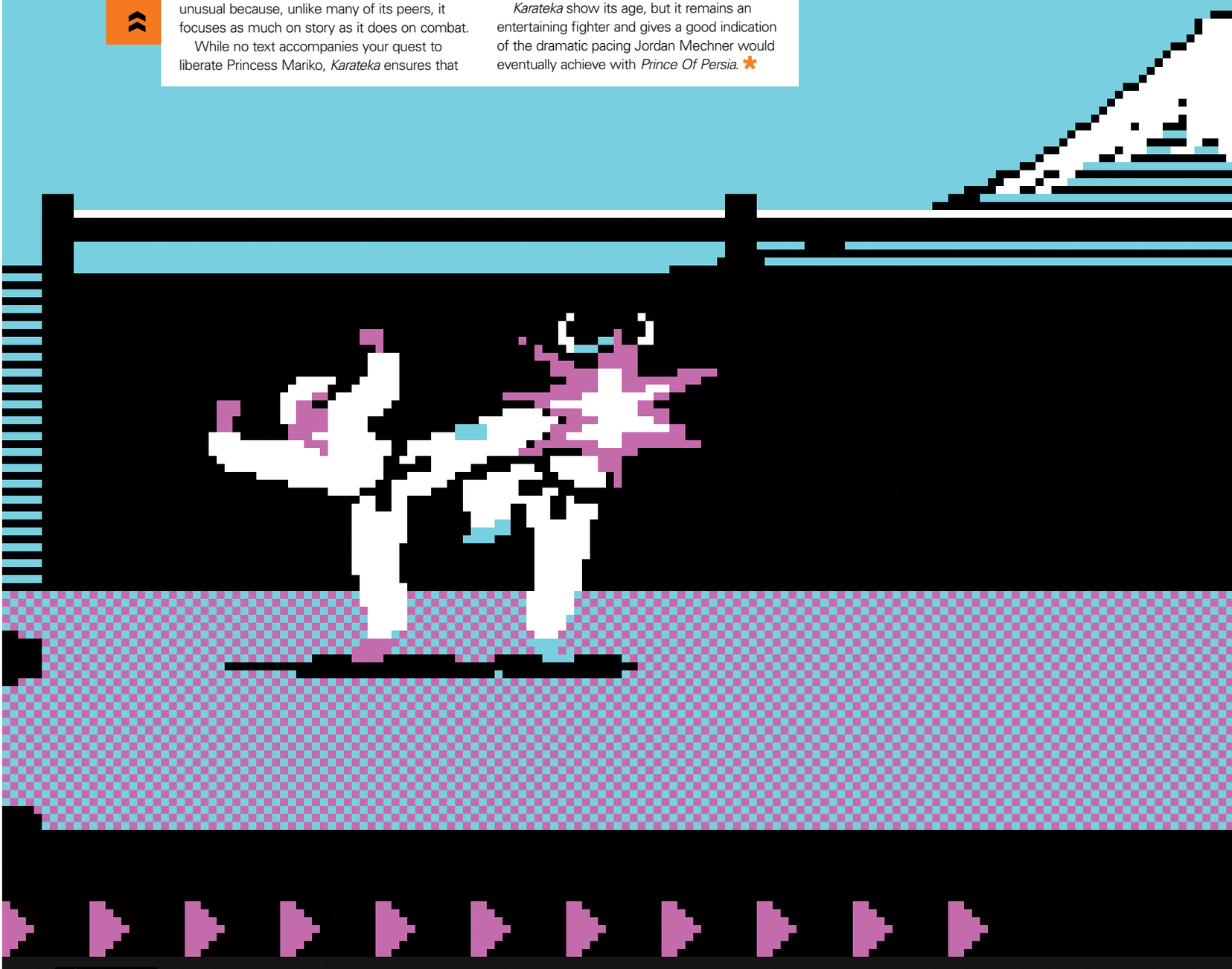
I never owned an Apple II, so *Karateka* originally passed me by. Granted, it was ported to a large number of systems over the years, but by the time it arrived on the Amstrad in 1990 (six years after its original release) I'd already moved onto Sega's Master System.

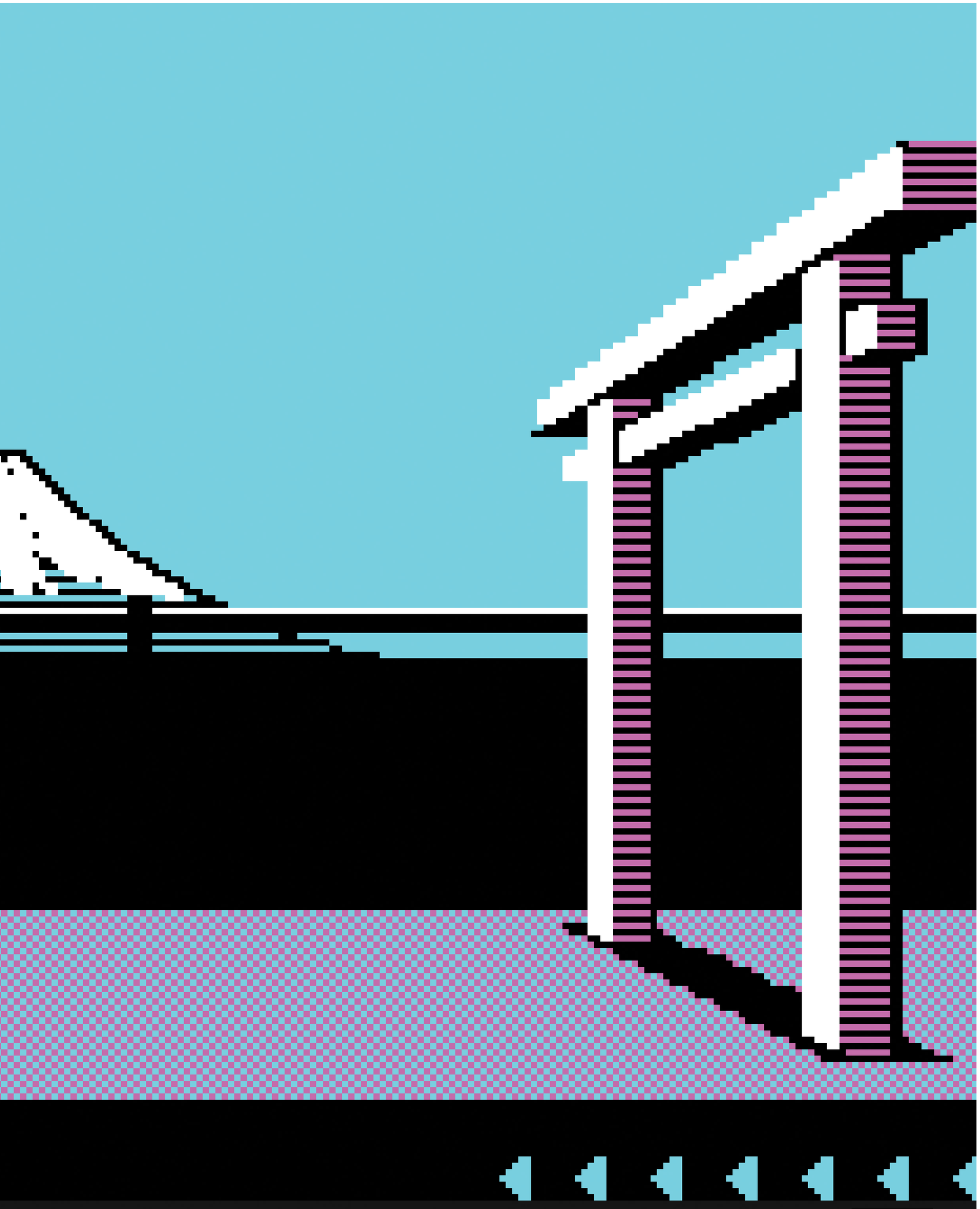
It wasn't until years later when I was writing a *Prince Of Persia* article for **games™** that I played the game and I wished I'd experienced it back in the Eighties. It surprised me that *Karateka* predated games such as *Way Of The Exploding Fist* and *International Karate* and *IK+* (titles I loved to play growing up). It's also unusual because, unlike many of its peers, it focuses as much on story as it does on combat.

While no text accompanies your quest to liberate Princess Mariko, *Karateka* ensures that a narrative constantly flows. Fights are intercut with cutscenes of Mariko looking forlorn in her cell, or her captor, Akuma, sending out more of his best men to challenge you. They're sparse, but do a great job of creating tension, more so when the game switches between you and your opponent running towards each other, ready to do battle.

The fighting is solid with the player having access to six buttons that represent high, low and medium punches and kicks. Early fights can be won with randomly placed kicks, but as later enemies move inside your defences you need to start relying on sly punches to keep them at arm's-length. It's a neat system, but lacks the later slickness of *IK+* and its ilk.

Karateka show its age, but it remains an entertaining fighter and gives a good indication of the dramatic pacing Jordan Mechner would eventually achieve with *Prince Of Persia*.



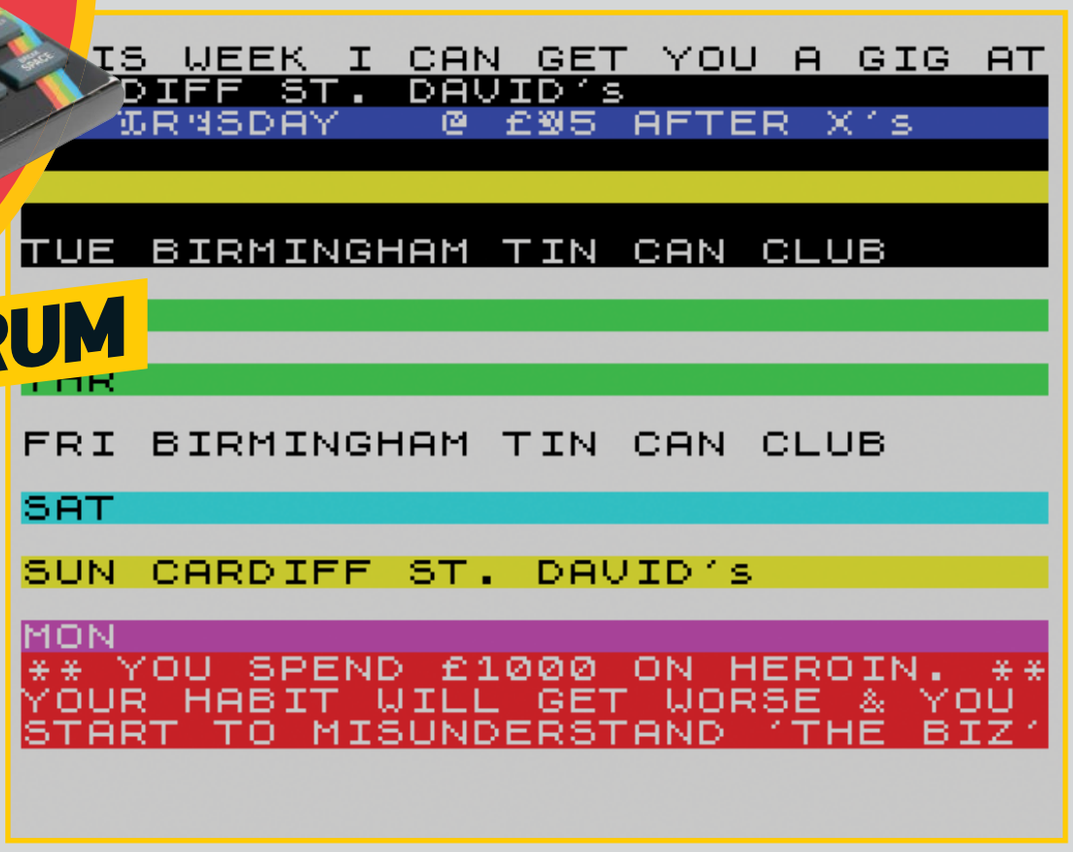


Minority Report

INTERESTING GAMES YOU'VE NEVER PLAYED

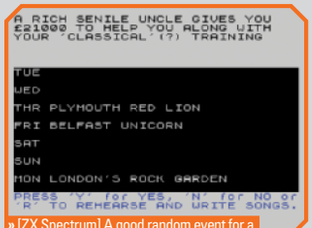
ZX SPECTRUM

The ZX Spectrum may be the UK's most famous micro, but with over 24,000 titles released, some gems obviously slipped through the cracks. Retro YouTuber Kim Justice is here, and she's about to get mining...

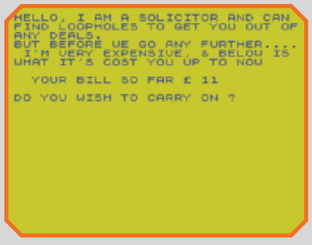

IS WEEK I CAN GET YOU A GIG AT
DIFF ST. DAVID's
R'SDAY @ £35 AFTER X's
TUE BIRMINGHAM TIN CAN CLUB
FRI BIRMINGHAM TIN CAN CLUB
SAT
SUN CARDIFF ST. DAVID's
MON
** YOU SPEND £1000 ON HEROIN. **
YOUR HABIT WILL GET WORSE & YOU
START TO MISUNDERSTAND 'THE BIZ'

THE BIZ

■ DEVELOPER: **CHRIS SIEVEY** ■ YEAR: **1984**


A RICH SENILE UNCLE GIVES YOU £21000 TO HELP YOU ALONG WITH YOUR 'CLASSICAL'17) TRAINING
TUE
WED
THR PLYMOUTH RED LION
FRI BELFAST UNICORN
SAT
SUN
MON LONDON'S ROCK GARDEN
PRESS 'Y' for YES, 'N' for NO or 'R' TO REHEARSE AND WRITE SONGS.

» [ZX Spectrum] A good random event for a change. Our uncle's just stopped us from playing 100 more gigs at the worst pub in the world.


HELLO, I AM A SOLICITOR AND CAN FIND LOOPHOLES TO GET YOU OUT OF ANY DEALS.
BUT BEFORE WE GO ANY FURTHER....
I'M VERY EXPENSIVE, & BELOW IS WHAT IT'S COST YOU UP TO NOW
YOUR BILL SO FAR £ 11
DO YOU WISH TO CARRY ON ?

■ Who *doesn't* want to be on *Top Of The Pops*, eh? *The Biz* gives everyone a chance to fulfill that dream, providing a music business simulator that's surprisingly detailed for something written in BASIC. After giving your band an appropriately rude name and picking a genre, you're thrown straight into the world of gigging week after week. Rehearse endlessly to get your band tighter, pound the streets dishing out flyers, and hopefully you'll graduate from dive bars (where a pint glass to the face of the bassist is not uncommon), to the hip and swanky rock clubs and polytechnics of days gone by.

The band experience is heightened by random events that can occur every week, ranging from the more mundane radio and regional TV appearances that you'd expect, to getting a dry ice machine that magically increases your stage presence tenfold! Or the van breaks down, your equipment gets nicked, your father doesn't bother giving you any of his pools money and before you know it, you're suffering from a crippling drug addiction through hanging out and networking with far too many hyped-up music business types. It turns out that life in the music business is actually pretty hard, and it's not too long before all the gigging and rehearsing feels like a punishing grind for no reward.

Few people knew that better than the man behind *The Biz* – Chris Sievey. He already had a failed music career of his own behind him, creating solid, but unsuccessful, post-punk frolics by himself and with Manchester-based band, The Freshies. While he may not have spoken to a solicitor who charges by the second for a phone call, a lot of his experiences, and perhaps even a smidgen of bitterness, went into *The Biz*, resulting in that most glorious type of simulator. One that takes the idealistic childhood dream and turns it into a punitive grind that makes you pray for office work, where everything goes wrong and the band is at each other's throats on a daily basis... and yet there is always the hope that the next single, the next record label, will change everything! Radio 1 will pick it up, you'll get on *Top Of The Pops*, the whole world will want to listen, and all will be okay – until the pressing plant goes on strike, anyway.

YOUR DRUMMER'S LEFT TO JOIN steel napkin
TUE CANCELLED
WED CANCELLED
THR MANCHE CANCELLED LLERY
FRI * REHEA CANCELLED £25
SAT CANCELLED
SUN THE SCOUT HA CANCELLED
MON CANCELLED
PRESS 'Y' for YES, 'N' for NO or 'R' TO REHEARSE AND WRITE SONGS.

» [ZX Spectrum] Steel Napkin are Lead Doily's rival band. They are skilled at stealing drummers and twirling moustaches. Shoot on sight.

What does one take away from *The Biz*? To give up your dreams entirely and embrace the cold hug of data entry? No, perhaps not – the game is so gripping that you'll never want to give up and cash out. Who cares if

IN DEPTH

"THE BIZ" STATUS IN WEEK 33 1984
ARTIST = lead doily
FROM A MANSION IN MANCHESTER
RECORD LABEL = yummy
CURRENT SINGLE = rocket bum
MUSICAL DIRECTION = acid skiffle
RECORDS IN STOCK = 9204
THIS WEEKS SALES = 796
TOTAL SALES..... = 796
WEEKS IN CHART.. = 1
HIGHEST POSITION = 152
THIS WEEKS CHART POSITION = 152↑
BAND TIGHTNESS = 3 %
STAGE PRESENCE = 62 %
VISUAL IMPACT = 99 %
SONG QUALITY = 0 %
FAN FOLLOWING = 16 %
DRIVE/AMBITION = 7 %
OVERALL 'STAR' RATING = 21 %
WEEKLY TAKING'S = £ 80
MONEY IN THE BANK = £ 187682
PRESS 'X' TO CONTINUE 'THE BIZ'
MANAGER
@£32&14%
VIDEO
PROMO
D/ICE

THE NAME OF THE GAME

■ If you forget your band's name, you'll find it here. Kim is a rich Northern brat who plays punk instead of bossing Dad's law firm. She wears a cloth cap to 'keep it real'.

I HAVE A DREAM

■ All the info on your latest single's performance. Sadly the 796 copies Lead Doily sold of *Rocket Bum* weren't enough to take home that crucial number-151 spot.

KNOWING ME, KNOWING YOU

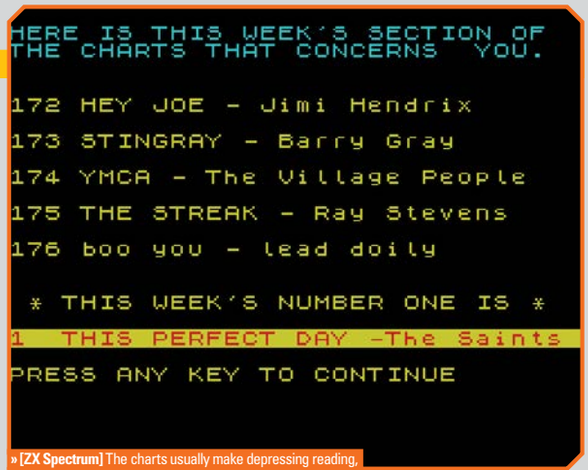
■ How good is the band? Lead Doily can wow a crowd, but they can barely hold their instruments. If you've got a promotion going on, you'll know about it here.

MONEY MONEY MONEY

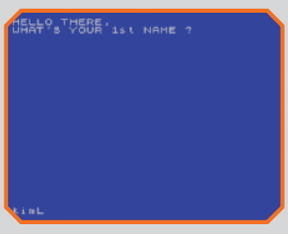
■ The bottom line. Being rich, Kim can piss money down the musical toilet for years – however if you want start with barely a fiver to your name, you can.

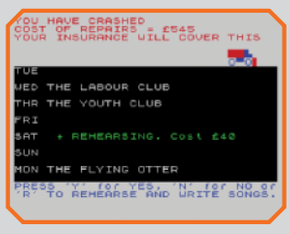
» **[ZX Spectrum]** *The Biz* features a lot of pink backgrounds. You'd expect no less from the legend who wrote *Christmas Is Really Fantastic.*

you're on your eighth record label in two years? As beaten up and drug-addled as the band might be, they'll give it their best. The simplicity and crudeness of BASIC never mattered as much as it did here, with a game that, unlike far too many do-it-yourself crudely-made titles of the day, deserves to be played and celebrated. Chris Sievey eventually found fame through top-quality entertainment as the endearingly Northern papier-mache head comedian Frank Sidebottom, before passing away in 2010 – this little Spectrum game from 1984 is one slightly forgotten part of his remarkable legacy.


HERE IS THIS WEEK'S SECTION OF
THE CHARTS THAT CONCERNS YOU.
172 HEY JOE - Jimi Hendrix
173 STINGRAY - Barry Gray
174 YMCA - The Village People
175 THE STREAK - Ray Stevens
176 boo you - lead doily
* THIS WEEK'S NUMBER ONE IS *
1 THIS PERFECT DAY -The Saints
PRESS ANY KEY TO CONTINUE

» **[ZX Spectrum]** The charts usually make depressing reading, but a world where *This Perfect Day* by The Saints is number one can't be all that bad.





IF YOU LIKE THIS TRY...

THE STUN
WIN A MILLION LOTTO! SEE PAGE 27
ROCK STAR ATTACKED BY KILLER BEES!
BY ACE STUN SNOOPER!
BUSTY BETTY STOLE MY TOY BOY! SEE PAGE 9

ROCKSTAR ATE MY HAMSTER

ZX SPECTRUM

■ Colin Jones' less-than-subtle music biz sim puts you in the shoes of Cecil and Clive, Trotter-esque dealers looking to manage a band to four number-ones inside of a year. Things tend to go wrong about the time you've set up a fundraiser for the Nuke Your Granny Society.

IT'S ONLY ROCK 'N' ROLL

ZX SPECTRUM

■ Released by K-Tel (from *As Seen On TV* fame), this game is similar to *The Biz* only a bit flashier, a bit less satirical and a lot more rubbish. If you ever want to hear a Speccy beeper try to play *Black Night* by Deep Purple every time you go to the main menu, this is right up your alley.

MILLIONAIRE

ZX SPECTRUM

■ Bored with the music business? You might want to give software publishing a try. *Millionaire* is the grandfather of *Game Dev Tycoon* – push your games, duplicate your cassettes and don't buy programs from Honest Harry unless you want a copyright smackdown. Quite good.

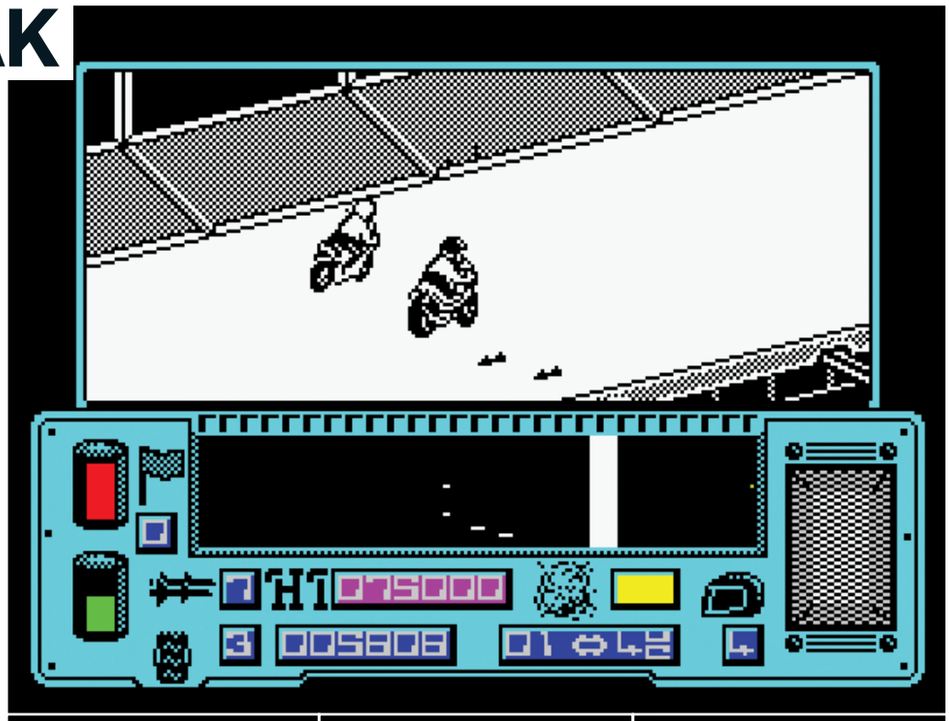
Minority Report

MEAN STREAK

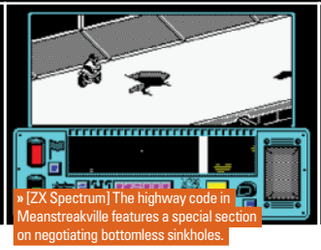
■ PUBLISHER: **DALALI SOFTWARE** ■ YEAR: **1987**

■ **Another day, another post-apocalyptic nightmare, where the hardened and the desperate earn their caps by riding around a track and shooting each other down in a never-ending fight to the death.** That's the essence of *Mean Streak*, a late-Eighties game where the genius is in somehow managing to fit all this desolation into a Speccy. The best way to describe it would be 'like *Deathchase* only isometric' – you play as the biker in the black helmet, and you're endlessly pursued by bikers in white helmets. You can beat them in various ways – pushing them off the track or into an obstacle, or blasting them with your guns. And all the while, you have to avoid various bits of detritus on the track, from cracks that will damage your tires, to walls that will leave you torn and twisted at the foot of a burning bike.

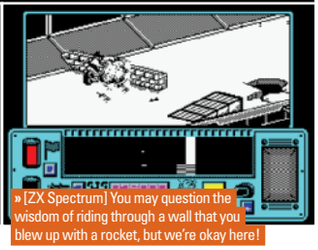
Your bike also has rockets, too, and they're not just there for a bit of overkill. What really sets this game apart is the destructible environments. Even if there's no way you can get past that brick wall, it's not over if you have the presence of mind to fire those rockets and smash the wall to bits. Sometimes it's the only option! There's jumps and oil slicks and lots of pick-ups along the way too, from more rockets to some much-needed fuel. Even within the bare-bones structure of the game, there's a lot of opportunity for flair and to do more than just play for a good score. The game lacks a killer in-game track that would make it really special, and you wish that you could encounter more than just one biker at a time, but it's a great little gem that excites for 15 minutes, and is always worth coming back to.



» [ZX Spectrum] As with many of things that involve violence and vehicles, *Mean Streak* is about getting on someone's tail and hitting hard.



» [ZX Spectrum] The highway code in Meanstreakville features a special section on negotiating bottomless sinkholes.



» [ZX Spectrum] You may question the wisdom of riding through a wall that you blew up with a rocket, but we're okay here!

MORE GAMES TO PLAY

» THE BOBBY YAZZ SHOW

■ DEVELOPER: **CYBADYNE** ■ YEAR: **1988**

■ Inexplicably not released until a *Crash* covertape featured it in 1991, *The Bobby Yazz Show* is a puzzler where you have to colour in blocks or try to find your way through an invisible maze, with commercials following every level and a typically smarmy host. The galaxy's quiz of the week might be lacking when it comes to truly engaging gameplay, but you can't fault the presentation and fun of it all.

» ROBOTO

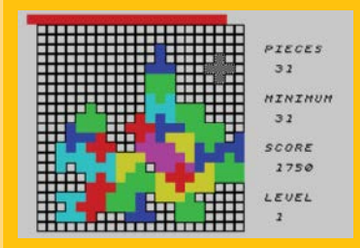
■ DEVELOPER: **EUGENE B. SMITH**
■ YEAR: **1986**

■ A sadly forgotten platformer by Bug Byte, *Roboto* differs from the pack because you can fly and shoot, which comes in pretty handy when collecting all of the trinkets. It doesn't make the game any less challenging, though, with intricate eye-of-the-needle sequences that'll test even the most hardened player. Perfect for anyone looking for something that's not quite the same as the likes of *Manic Miner* and *Technician Ted*.

» ROCKMAN

■ DEVELOPER: **SMILING ASSASSIN**
■ YEAR: **1985**

■ One of the more garish 48k games around, *Rockman* is like *Boulder Dash*, but with the addition of some platform elements and *Lode Runner*-esque digging. The high level of cute doesn't make the game any less challenging, and the quest to find all of the ladybird-esque mushrooms can get intense after just a couple of screens. It also has one of the most drawn-out game over sequences in the history of the Speccy.



» NON COMPOS MENTIS

■ DEVELOPER: **NIGEL GRANGE** ■ YEAR: **1991**

■ A simple puzzle game where you use different shapes to fill up a grid before the time runs out. Seriously, there's nothing more to it than that and it is in no way a game you'll spend hours obsessing over, thinking that you're doing great before the cosmic sequence of shapes takes a savage turn and leaves you with more gaps than you'll find in Aston Villa's back four. Available only on *Your Sinclair*'s April 1992 covertape.

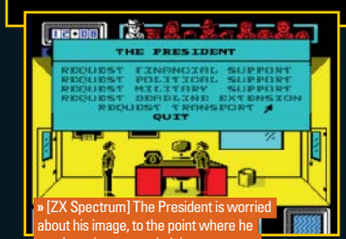
HIJACK

■ DEVELOPER: **PARADISE SOFTWARE** ■ YEAR: **1986**

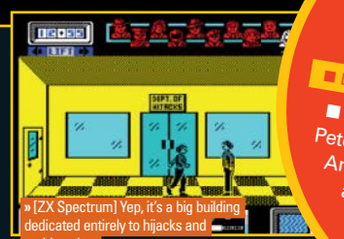
■ **There's always something to be said for a bit of political intrigue, and *Hijack* is probably as good as you'll get for it on the Speccy.** It's a side-scrolling graphic adventure, but quite fast-paced – you have to pool together enough resources to get a good assault team together so that you can stop a bunch of terrorists who've hijacked a plane. Everyone from the secretary of state to the president himself is at your disposal, and as befits someone in such a highfalutin position, you are expected to spend lots of time rifling through various bins looking for important scraps of paper.

It's a tense little game, further enhanced because there's little like it on the machine – how often do you have to patiently wait for a lift so you can walk back to your office? Or patiently wait for your secretary to bring in the person you need to speak to? Or patiently wait in general? In a world where more often than not you'd be jumping on top of the lift to avoid a flying telephone, *Hijack* certainly stands out as a slow-paced and rather antiquated experience, but also quite a suspenseful one – it's not going to be for everyone, but it's at least worth giving a spin. It's certainly a little clunky and obtuse, but once you adjust to the game's quirks and figure out how to do things, you'll do just fine.

"You are expected to spend time rifling through bins"



» [ZX Spectrum] The President is worried about his image, to the point where he won't eat bacon sandwiches anymore.



» [ZX Spectrum] Yep, it's a big building dedicated entirely to hijacks and nothing else.

RETRO SUNKER

» EASTENDERS

■ DEVELOPER: **TOWERS ASSOCIATES** ■ YEAR: **1987**

■ Does this game feature Dirty Den and Peter Beale fighting in the Queen Vic with Angie as the ref? No. This menial task-a-thon is the life of an *EastEnders* extra, and just as interesting as that sounds.

» SPECIMEN

■ DEVELOPER: **REMSOFT**
■ YEAR: **1990**

■ As the Speccy entered its twilight years, a lot of games were only released via covertape – *Specimen* was one of them, and could have easily been in the shops about thee years previously. It's a quite *Underwurlde*-y game where you collect passes and eat potatoes. The cool twist is that rather than jumping, the specimen can build platforms at will. A little gem that's not as hard as most Speccy platformers.

>DRINK LAGER
You drink the lager. Wow that felt ghud . shis shtuff is shpretty shtrong
shuddenly sheverysh ing gosh red
An ambulance roars round the corner to save you from an untimely death
You are by a bed in an empty

» URBAN UPSTART

■ DEVELOPER: **PETE COOKE**
■ YEAR: **1983**

■ If you're looking for an old text adventure that doesn't have goblins in it, then you can't do much better than *Urban Upstart*, a gripping tale of inner-city survival where you have to escape from the barren wastelands of Scarthorpe, avoiding the fuzz and assorted ne'er-do-wells…so very 1983. A crude little game, but quite amusing. Just don't assume that you'll automatically leave your house fully-clothed and you'll do alright.

» ATV SIMULATOR

■ DEVELOPER: **TIM MILLER**
■ YEAR: **1987**

■ One of many Codemasters simulators, *ATV* wheelies away from mediocrity by offering up an exciting side-scrolling racer against the clock, where you navigate your big quad through various obstacles, from hay bales to sphinxes to the worst of the whole lot: seals bouncing beachballs. It's great if you want to get flung around the screen for five minutes, and at two quid there's no reason for it to be absent from your collection.

» THE GREAT SPACE RACE

■ DEVELOPER: **LEGEND** ■ YEAR: **1984**

■ Heavily hyped, overpriced at £15 and utterly derided on its original release, *The Great Space Race* is curious enough to deserve a second look. You command four ships as they try to deliver Natol to bases and fight with the likes of the evil Haberdaber, Genghis and Krone. It's quite fun to see the game try and pull off epic dogfights between ships, although you don't exactly do an awful lot here. It's the Speccy's idea of cinema.

Fire and Ice

A spiritual successor to Gribbly's Day Out and Rainbow Islands, Fire And Ice was also influenced by Turrican. Andrew Braybrook tells Rory Milne how Graftgold pushed the Amiga to create its classic platformer

In the early Nineties, when the focus of computer game development shifted to 16-bit systems, the result was bigger and more visually impressive games. Perhaps less obvious to the games-playing public, however, was that these Amiga and Atari ST titles required teams rather than solo developers. Renowned developers such as Graftgold were no different in this respect, as coder Andrew Braybrook explains: "In the 8-bit days, we would be one-man projects, mostly. As we graduated to 16-bit, we had to mould into teams, and I stopped doing graphics, knowing my limitations. The publishers were keener on the Atari ST, presumably led by what was selling. The price of the machines was probably also a factor. It was always our intention to cover both machines at the start, but we had to design and code for the lowest common denominators."

As the decade rolled on, the price of Commodore's 16-bit system fell, which made an Amiga-focused sequel to one of Andrew's classics a cost-effective prospect. "By the time we got to *Fire And Ice*, the Atari ST market was waning and we wanted to show why the Amiga was better. We decided to do an Amiga-only game. I was keen to revisit *Gribbly's Day Out*, and we developed a demo with all-directional scrolling. I wanted to expand from the flat ground idea and do different slopes, and out of that came rolling and sliding."

In the know

- **» PUBLISHER:** RENEGADE
- **» DEVELOPER:** GRAFTGOLD
- **» RELEASED:** 1992
- **» PLATFORM:** AMIGA, VARIOUS
- **» GENRE:** PLATFORMER

» [Amiga] Cool Coyote leaves his arctic home and begins his mission to defeat an evil wizard.

» The boxart is reminiscent of *Looney Tunes*, don't you think?

"By the time we got to Fire And Ice, the Atari ST market was waning and we really wanted to show why the Amiga was better"

Andrew Braybrook

As Andrew worked on the physics, Graftgold's artists created backgrounds and iterations of a canine hero. "The guys were using an art package exclusively. There didn't seem any point in drawing graphics on paper because the limited number of pixels and colours you had to render into was too restrictive. The floppy-eared 'dog' was a bouncy creature that was deemed too radical, though the backgrounds were quite pretty and the floppy ears were neat. Therefore, we set about making a conventional character with lots of movement. Possibly that gave Cool Coyote more 'attitude.'"

While Cool Coyote was energetic, his dynamism was tempered for a tuneful demo created for prospective publisher Mirrorsoft. "Courting a publisher would be done on trust and reputation. Usually publishers came to us, often by virtue of one of the producers having worked with us before. It was Jason Page who came up with the bouncy tune on the piano. Phillip Williams was the lead graphics artist and had come up with the Cool Coyote graphics. The next step was to let the coyote play the piano, built into the titles sequence."

With Mirrorsoft secured as distributor, Andrew looked to Factor 5's *Turrican* for inspiration while recycling code from Graftgold's *Rainbow Islands*. "We had seen and admired *Turrican* on the Amiga, so that set the presentation bar. I tried to make a dynamic sunset by altering the colours in real time, but four bits of colour made it too lumpy. That's when we changed to the curtain-type drop. I had not done a platform game since *Rainbow Islands*, and a lot of our code was still applicable, so the fact that *Turrican* combined a shooter with platform ideas was appealing. But [*Fire And Ice*] was always more platformer."

Beyond aesthetic influence, the Amiga *Turrican* also inspired *Fire And Ice*'s horizontal scrolling following some brainstorming between Andrew and *Turrican* developer Factor 5. "It was likely Julian Eggebrecht whom we spoke to first on the phone. There was no email in those days! [Then] the guys came over for a couple of days. We were running at 25 frames per second, half the rate of *Turrican*, and couldn't get to the full smooth rate that they had. When we explained that we had implemented triple-buffering to build up to two frames in advance, Factor 5 retreated to the other end of the office, then came back over and just said: 'No.' [So] we used a method of scrolling that the guys told us about, which meant we didn't have to refresh the whole background every frame, only the leading edge. Very efficient, the Germans!"

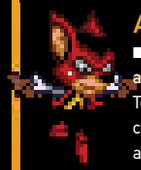
Satisfied that *Fire And Ice* would now boast smooth multi-directional scrolling, Andrew looked to ▶

FIRE AND ICE 101

■ While primarily a multi-level platformer, *Fire And Ice*'s core gameplay brilliantly incorporates a shoot-'em-up element by hiding parts of keys with random opponents. Because a complete key is required to level up, and because any foe might have a key-part, blasting is as essential to progress as platforming skill.

MASCOTS WITH ATTITUDE

More 16-bit anthropomorphic heroes



AERO THE ACRO-BAT

■ Although Iguana Entertainment developed both of Aero's adventures, he was actually publisher Sunsoft's mascot. Technicalities aside, the heroic bat's platformers provide a stiff challenge across sprawling worlds, and although his swooping attack is tricky to perform it's satisfying to master.

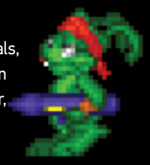
BUBSY THE BOBCAT

■ A widely disliked character, but the feline's 16-bit trilogy provides enjoyable – if unoriginal – platforming. Bubsy may not have been the *Sonic*-beater that developer Accolade had hoped for, but his glide and pounce moves make up for the samey levels found in his games.

SUPERFROG

■ Despite his popularity with Amiga gamers, Team17's amphibian hero never became their mascot; in fact, his first outing was his only one. *Superfrog* distinguishes itself from many 16-bit platformers with its collectible range weapon and controlled descents after taking flight.

JAZZ JACKRABBIT



■ There's no doubting Jazz Jackrabbit's platformer credentials, but because he's armed with a laser gun his adventures often drift into run-and-gun territory. This is no bad thing, however, as it gives the fuzzy combatant a fighting chance against his relentless opposition.

MR NUTZ

■ The star of two quite different platformers – a SNES original that later became multi-format and an Amiga exclusive. Mr. Nutz lacks character in his second outing, but both it and his original appearance boast solid gameplay and accomplished level design.

ROCKY RODENT

■ The partly inspired and partly insane Rocky Rodent powers-up by changing hairstyles. But his SNES platformer works because highly imaginative mechanics support this deranged premise. These allow Rocky to throw Mohawks, ram foes with a quiff and bounce on a coiled fringe.

SOCKET

■ Socket has his detractors – thanks to his only game borrowing gameplay and mechanics from Sonic's original Mega Drive title. But beyond that obvious criticism, the robotic duck's platformer features tight, original level design and interesting, nicely-rendered visuals.

» Andrew left the games industry in 1998 but is still coding to this day.

▶ building worlds for his project – starting with its final location, Egypt – and allowing things to evolve from there. "We didn't storyboard anything, ever, as we worked from the machines to see what we could make them do. I started out with the last world and the fire monsters. I had a plan that they would be on all worlds, and be causing fires everywhere. Unfortunately, the mechanism was unwieldy and I chose to use it only on the last world. That did allow us to have an underwater world and gave us more colours on the early worlds."

The design of these earlier locations was tackled world by world with each new land building on the challenges and set-pieces that Andrew and his team had devised for the previous one. "After the initial experiments with the Egyptian areas, we settled down to working on one land at a time. Phillip and Jason were adding their own ideas, and Phillip could back his up with graphics, he was very fast. On the underground levels, Phillip reckoned he could do a three-layer waterfall so we let him get on with animating it. We made a feature of it as it looked so good. All the mechanisms for one land were available to the next, so we tried to get more ambitious as we went along. Sometimes we would map a bit of a level out and then have to figure out how to proceed."

In terms of influences on *Fire And Ice*'s level design, Andrew cites an old BBC favourite, but mainly puts their look down to Graftgold playing to the strengths of their artists. "There's an episode of *The Goodies* that created interesting Scottish creatures: the bagpipe spider and the wild roaming haggis, for two. Apart from that, though, with the brief of going from a cold place to hot, we just picked scenarios that we could draw. Phillip had a big influence, since he was putting mouse to pixel. He was drawing objects spinning round in 3D, like the fish on World 3, that no one else was doing at Graftgold."

As *Fire And Ice*'s worlds took shape, Andrew approved elaborate bosses and added to the title's gameplay, arming Cool Coyote with ice bullets and providing him with canine helpers. "I was just after getting more objects on the screen, and ice bullets did the trick. They also showed off the physics. When we added the puppies into the game, it became about

» [Amiga] It's Cool Coyote versus the Evil Wizard in *Fire And Ice*'s ultimate boss showdown!

> **We settled down to working on one land at a time**
> Andrew Braybrook

herding them, and getting them to help take out the big bosses. I spent a lot of time tuning up the behaviour algorithms so you can get them to follow you, or go ahead of you. People expected big bosses, and the guys were pushing for them. I was aware of the amount of CPU time taken up by plotting large sprites but also willing to go along with the ideas they came up with."

Hidden areas followed, which Andrew feels could have been a easier to find given how much they enhanced the game. "They offered three things: variety, strategy and surprises, because you couldn't see where the secret teleports were. Actually, I think that was being too mean, and I would use graphics now to show there was something there at the transport points."

Of equal importance was the implementation of mechanics that Andrew had planned for *Fire And Ice* from its earliest designs based around the time of day and temperature of the game's geographically disparate worlds. "Definitely the idea of going to the hotter worlds where the ice weapons were less effective was part of the plan. The creatures defrosted quicker, that's why we had to go from a cold place to hot. The day and night lengths both shortened, if memory serves, which isn't technically correct, and actually I could have made the weapons more effective at night, but I didn't."

By way of referencing *Fire And Ice*'s inspiration, a bonus level featuring the cast of *Gribbly's Day Out* was added, which remained the game's only tribute. "Having Gribblets mop up the bonuses gave the player an incentive to collect faster. It took a long time to put the graphics together, and having no ground meant we had to end the level if you fell off, and I didn't want that to cost a life. It would've been nice to do some more bonus levels, if they were appropriate."

Later on, Andrew was faced with a clash of *Fire And Ice*'s Arctic-to-Egypt plot with the practicality of the game opening with challenging slippery surfaces. "We worked on the non-slippery hot levels first, but having a route from cold to hot, we had to start [the game] with the coldest place first, and that happened to be the slipperiest. I was conscious of the fact that it was harder to play, so I wound down the slipperiness as much as I could."

Fire And Ice next faced the issue of its publisher, Mirrorsoft, going bust. Andrew remembers approving of the firm that took over distribution. "Getting a deal with Renegade allowed us to work with people we trusted. I thought we got a good reception, and finally the Amiga fans got a game that wasn't coming out on the ST."

Although a pared-back ST version did follow, Andrew's final thoughts on Graftgold's first Amiga-focused title reflect satisfaction that *Fire And Ice* was a worthy showcase for the system. "It took well over a year to put together, and it was tough going at times trying to come up with different things. Everything had to be done meticulously. Since the game represented about five man-years of work I think we did OK." ✱

Thanks to Andrew for telling the *Fire And Ice* story.

» [Amiga] Twin counter-balanced platforms and an armoured foe provide Cool with an awkward challenge.

» [Amiga] Cool Cyote slips on a diving mask for an underwater section.

DEVELOPER HIGHLIGHTS

GRIBBLY'S DAY OUT
SYSTEM: C64
YEAR: 1985

PARADROID
SYSTEM: C64
YEAR: 1985

URIDIUM (PICTURED)
SYSTEM: C64
YEAR: 1986

GRAFTGOLD'S 16-BIT GEMS

More Graftgold 16-bit brilliance

PARADROID 90
1985

■ As well as sporting nicer visuals than its 8-bit predecessor, *Paradroid 90* also differs in a few other respects. The 16-bit *Paradroid* scrolls vertically rather than on both planes, although this doesn't affect the gameplay, the game's ships are more expansive and it boasts a bigger droid transfer sub-game, which can be disabled.

RAINBOW ISLANDS
1987

■ Arcade conversions are seldom remembered as fondly as the Amiga and ST adaptations of Taito's colourful *Bubble Bobble* sequel. But Graftgold's computer versions of the popular coin-op are so faithful to the original in how they look, feel and play that they set the standard for every 16-bit arcade port that followed.

THE OTTIFANTS
1993

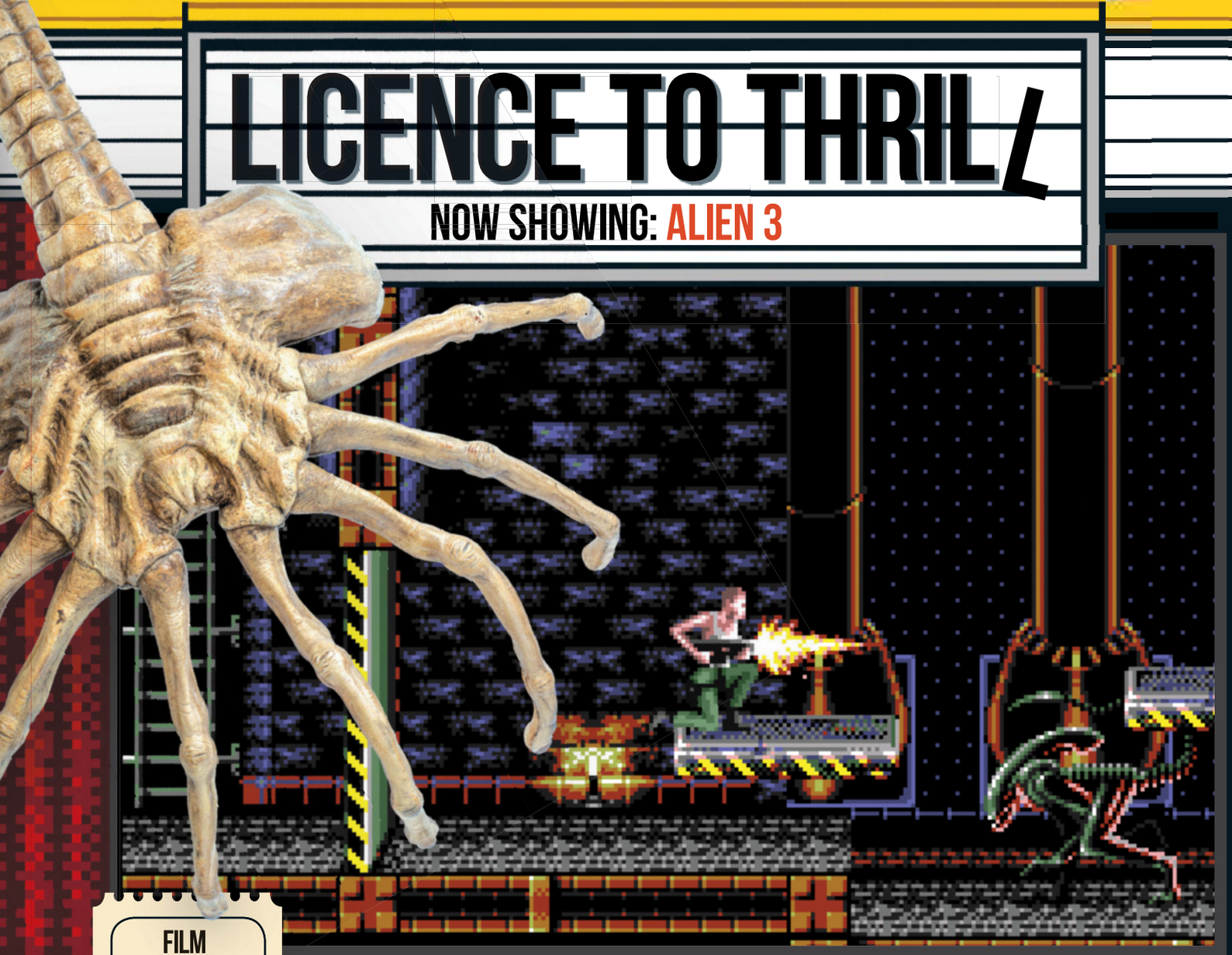
■ A game based on an obscure German cartoon was never going to sell millions, but the Sega Europe-published *Ottifants* did garner some good reviews. Graftgold's attractive platformer stars a baby elephant on a mission who has some interesting moves – such as using his trunk to fire sweets or suck useful objects towards him.

URIDIUM 2
1993

■ While Graftgold compromised on its Amiga *Paradroid* so that a near identical ST version could be produced, it made full use of the Amiga's hardware when developing *Uridium 2*. Besides multi-directional scrolling, stunning looks and top-notch audio, this wonderful sequel adds weapon power-ups and a two-player mode.

LICENCE TO THRILL

NOW SHOWING: ALIEN 3



FILM

- **» YEAR:** 1992
- **» STUDIO:** 20th Century Fox
- **» DIRECTOR:** David Fincher
- **» STARRING:** Sigourney Weaver, Charles Dance, Lance Henriksen, Charles S. Dutton, Brian Glover, Ralph Brown
- **» BUDGET:** $55,000,000
- **» BOX OFFICE:** $155,933,485

GAME

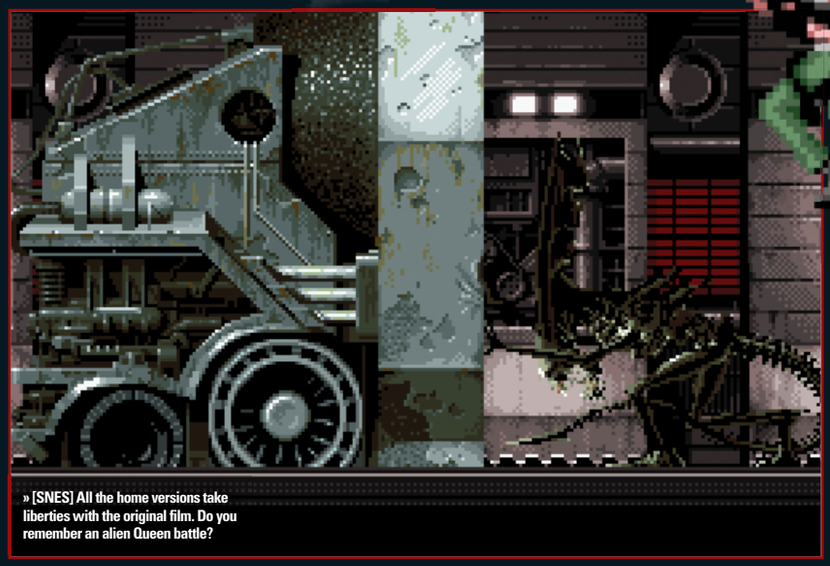
- **» YEAR:** 1992, 1993
- **» PUBLISHER:** Sega, LJN, Virgin Games, Arena
- **» DEVELOPER:** Sega, Probe Software, Bits Studio

The film may have been scorned, but that didn't stop Alien 3 from being a great game. Darran Jones looks at its many iterations and quizzes the developers of the SNES version

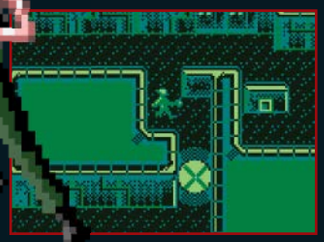
Many consider *Alien 3* to be a cinematic disappointment. While it's not something we'd necessarily agree with, it's not hard to see why many filmgoers air that opinion. It lacks the gung-ho action of James Cameron's *Aliens*, struggles to maintain the dramatic pace and scary sequences that made the original *Alien* so impactful, and it has one of the most downbeat endings of any big budget Hollywood movie. History has since told us that Fox had heavy control over newcomer David Fincher (although his interesting filmmaking techniques do occasionally appear) and that the film went through numerous drafts as Fox desperately tried to create something salvageable for audiences. By far the most interesting was Vincent Ward's take, who came up with the idea of Ripley crash landing on a wooden satellite that was inhabited by monks. Fox had other ideas, however… Worrying about the sheer costs such a concept would require, it insisted Ward made numerous changes. When he refused, Ward was fired and David Fincher was drafted in complete with new scriptwriters, who would ultimately still use many of Ward's themes (he ends up with a story credit).

Despite some good ideas, the film didn't strike the chord among *Alien* fans that Fox wanted. Among those disappointed were Nick Bruty and Nick Jones who, having been given the gig of creating *Alien III* for the SNES, were able to watch a special screening of the film. "We were both very excited," recalls Bruty. "We knew there were many script rewrites and were hopeful the movie experience would feel different from the script reading. It didn't. By the end we walked out feeling depressed. I loved the characters from the previous movies. Seeing them discarded in that fashion devalued the

» [C64] It's stripped down, obviously, but this is still a surprisingly good port.



» [SNES] All the home versions take liberties with the original film. Do you remember an alien Queen battle?



"This is a maximum security prison, and you have no weapons of any kind?"

Ellen Ripley

continuity of the series. It was such a glum movie and not an appropriate send-off of Ripley's character."

Of course, the two Nicks had been aware of the low-fi nature of *Alien 3*'s script and its potential lack of action, as they'd already been working on the game for several months and were looking for a suitable solution. In the end they did the only thing that was sensible, even if it wasn't going to make for a very authentic adaptation – they ignored it "When we got the script with no weapons, a single alien and a dreary world we were scratching our heads wondering how to make this entertaining," recalls Bruty. "Without really talking to anyone we just decided to ignore those aspects of the film and revert more to *Aliens*. We gave her pulse rifles, flamethrowers and a multitude of aliens. We kept waiting for someone to see the build and demand we take it all out. Thank goodness no one ever did!"

As with many film licences of the time, the game's rights were divvied up among several developers and publishers. Sega acquired the rights to release an arcade game, LJN commissioned Bits Studios to create a game for the Game Boy, while Probe created the rest of the home ports, with LJN handling publishing duties for the NES and SNES versions, Virgin looking after the Amiga and C64 games and Arena in charge of the Sega ports.

As a result, every version of *Alien 3* would play hard and loose with the film's plot – which proved the right thing to do, as it's hard to imagine how a lone alien stalking its prey

» [Game Boy] Plenty of characters from the film turn up in the version by Bits.

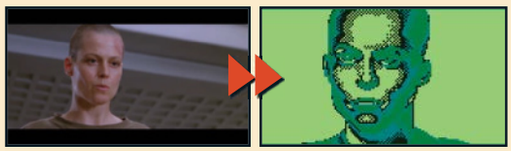
» [Arcade] There's an android in *Alien 3* but it looks nothing like this!

MOVIE TO GAME COMPARISON

Despite its vastly different tone, the film and games do share a few similarities...

RIPLEY IN TROUBLE

At the start of the film, Ripley, Newt and Hicks are preyed upon whilst in hypersleep by the previously-hidden xenomorph, which causes their ship to crash on Fiorina 161. The sequence has been adopted relatively faithfully in the SNES version of the game.

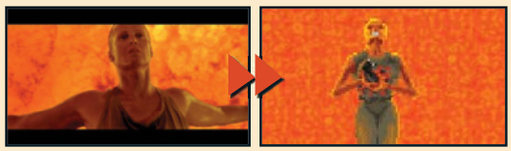


HAIR TODAY, GONE TOMORROW

Despite her A-list status at the time, Sigourney Weaver was only too happy to shave her hair to play the role of Ripley. It's replicated perfectly in the game, with your digital avatar of Ripley looking just as shaved and lean as she does in the movie.

LOCATION, LOCATION

One thing all the games do well (even *Alien 3: The Gun*) is to feature many of the locations from the film. Depending on the game there are sections on the Sulaco, the infirmary and the facility furnace. Even the 8-bit versions capture the grimy atmosphere of the film.

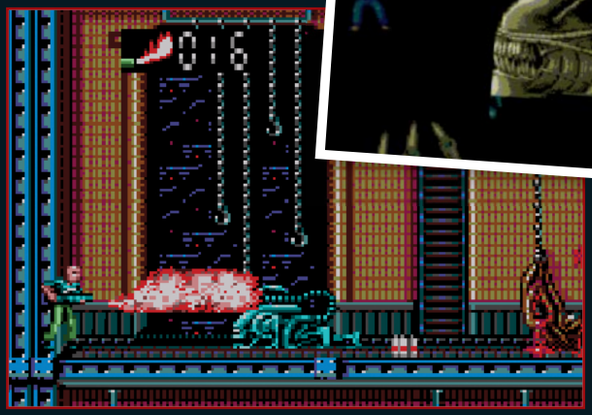


RIP-LEY IN PEACE

Realising she's impregnated with an alien Queen, Ripley swan dives into a furnace, grabbing the alien as it bursts from her chest, stopping its escape. The SNES version copies this to a T, but adds additional value in the form of a battle with another Queen that takes place beforehand.

NOW SHOWING: ALIEN 3

» [Arcade] *Alien 3: The Gun* is a relentless hardcore shooter. A friend is recommended.



» [Master System] No matter what version you play, the flamethrower is incredibly useful.

» [Game Gear] Frustratingly, it's far too easy for aliens to drop down on you in the Game Gear version.

▶ would have worked at the time (the concept wouldn't be explored fully until the release of *Alien: Isolation* in 2014). Sega's game, *Alien 3: The Gun* dispenses with Ripley completely and simply becomes a hardcore lightgun shooter with the player mowing down endless scores of aliens and even robots on later stages. There are certainly some satisfying boss fights to be had, and the pace is relentless, but its gets very samey, and isn't helped by the nondescript looking corridors that the players must race through. Interestingly, it's the only *Alien 3* game released that offers co-operative two-player action.

The Game Boy version by Bits Studio feels a lot more authentic, mainly because it features various characters from the movie and replicates some of the survival themes featured in David Fincher's film. Although there are still lots of aliens, this is a game that rewards exploring and Ripley will need to search diligently for keys and other useful items to ensure she stands a fighting chance against the Xenomorph hordes. The Game Boy's dingy palette does a good job of capturing the griminess of the movie, while its small screen adds to the claustrophobic nature of the gameplay.

Probe's home system ports were numerous and consistent. They all follow the same structure too and are based around Ripley navigating the prison saving prisoners. Unlike the film she's equipped with a solid array of weapons, but must continually replenish ammo by crawling around vents and ducts. While all the various outings are very good, Ripley is positioned to the far-right when running in some versions, which makes it very hard to avoid aliens. It's a mistake that could have been easily rectified with a little tweaking of the camera and does make those versions a little too hard for their own good. There's nothing worse than seeing the final prisoner you need to save in sight and then getting killed by a Facehugger that suddenly appears from off-screen.

Interestingly, Probe's SNES version is completely different from the others and arguably the best version of the lot. While it retains the action, it adds far more for Ripley to do thanks to varied missions that ensure gameplay never gets boring. It also features the same beginning and ending as the film too, although it still manages to take a few liberties here and there. Bruty remembers the whole project to be very hands off, which is surprising when you

» [Mega Drive] A poorly-placed camera makes the non-SNES games needlessly difficult to play.

Q&A: NICK JONES

The SNES coder revisits his moody masterpiece

What did you think when you realised there were no guns in the film's script?
I know we originally considered having a vast world with a single alien and a deep AI. But that just wasn't in keeping with what we thought people wanted to play. I know we fought over this for a while, but once the decision had been made to not strictly stick to the movie's premise, we never looked back.

Is it more challenging to make a game based on the film that it shares little in common with?
It was liberating *not* to have to stick to the original film. If we had stuck with the film's original premise, it would have seriously limited the game. Creative license and taking things from the *Alien* franchise that we knew would work [in *Alien 3*] was what we had to do.

What's the hardest thing you encountered from a technical point of view?
The *size* of the project. Having previously done C64 games, that had very little memory, going to the SNES and its multitude of graphics modes and 16 times more memory – wow. The games were much bigger, had to be much more polished and there had to be a lot more content. We made this game using almost the traditional team set up of one programmer one artist/one musician but it was obvious to me that things were going to change. My usual C64 projects would take between three and six months. *Alien 3* took me about a total of 15 months to write.

What's the hardest thing you encountered, from a gameplay point of view?
I think we made Ripley too floaty when she was jumping. I guess I was too close to the project. It felt okay when we first did it, but it was too easy to commit to a big floating jump and then not be able to back out. From the technical side, having Ripley consist of a top and bottom half that could work independently was tricky. The split point was at her waist. It allowed us to create a character that could run, jump, crawl, swing, climb and always fire her gun, or rocket launcher or the flamethrower. So a big win for the player.

Is there anything you wanted to add that didn't make the final cut?
Everything Nick [Bruty] made and more was used in the game. In fact, when we were figuring out the various animations that we needed, Nick always went overboard. Nick's art was completed about half way through the project. But I found we needed more art. So I spent a lot of time going through Nick's drives, cobbling chunks of art together that I don't think he ever intended to be in the game – such as the fullscreen, salivating alien when the game was over. But one thing I really wished we could have put in the game was the work loader that Ripley used to defeat the Queen Alien in *Aliens*. I wish we could have put that in the game.

"We're all gonna die, the only question is when. This is as good a place as any to take your first steps to heaven"
Dillon

consider how much Fox tinkered with the actual film. "I don't recall any involvement at all," he reveals. "I think we were left to our own devices at least for the time I was on the project although I wasn't there for the whole production so they may have become more involved by the end."

Aside from the arcade game, visually, the SNES port is arguably the most impressive of the lot thanks to meticulous animation (although the other versions are no slouch) numerous graphical effects and a wonderfully brooding soundtrack. Relative newcomers to the console, both Nicks soon realised just how powerful Nintendo's system was. "We had never worked on a SNES before," recalls Bruty, "so it was a lot of fun experimenting with all the different graphics modes it had. For me the biggest difference was having such a subtle colour palette. I wasn't trained in art and had no idea about colour theory. I started making graphics with the colour spectrum and had to adjust my art knowledge as each new generation of console came out. Just using the SNES taught me a lot about the kind of art I was capable of."

As impressive as it was, the SNES version wasn't without its issues. A convoluted map system (that saw rooms from one part of the hub map bizarrely link to other sections) made traversing the game quite difficult if you didn't pay attention to what was going on. While the other Probe versions are effectively big mazes, they'll still relatively easy to negotiate in comparison. Bruty reveals method to the seeming madness. "It was meant to be a sprawling complex that at first would need a map to get around but over time you would work out shortcuts and seal off areas," he explains. "If I could change something about the game it would be to allow the player to clear out a room and seal it off. As long as that room is sealed you are safe. Then you could go through the map creating your own pathways."

Map orientation aside, *Alien 3* on SNES was a worthy use of the licence. Hell, we'd argue that all the versions of *Alien 3* still hold up, probably a damned site more than the movie it's based on. Does that mean then that its better to simply ignore the licence and create whatever you want? "Only if someone [doesn't hold you] accountable for it," jokes Bruty. "When I look back I am quite amazed that no one questioned the changes we made. Maybe they all had the same idea."

ARTISTIC LICENCE

These weren't in the film...

ALL THE ALIENS

■ Although several alien forms appear briefly in *Alien 3*, only the Runner is the actual antagonist. Each developer makes its games more exciting, adding Face Huggers, Queens, Ovomorphs, Drones and other enemies to ensure Ripley is constantly kept on her toes.

SO MANY GUNS

■ Ripley might be weaponless in the movie, but that's not the case in the games. She has access to pulse rifles, grenade launchers and a powerful flamethrower, giving her a fighting chance against the many enemies she faces.

RIPLEY OF ALL TRADES

■ Unlike the film, Ripley is constantly doing something in the SNES game. One minute she's exterminating alien eggs, the next she's saving prisoners or locking of parts of the prison. She's even handy with a welder, patching up pipes throughout the complex.

NOTABLE VERSIONS OF ALIEN 3

MEGA DRIVE/AMIGA

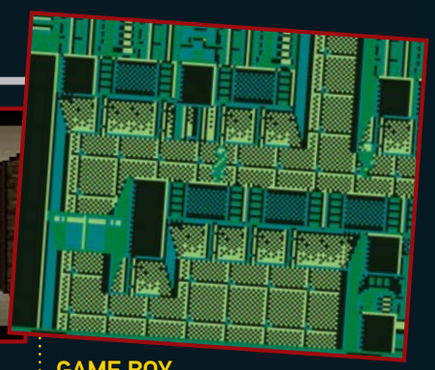
■ We have mixed feelings about these versions of *Alien 3*. While it looks fantastic it's let down in two major areas. Ripley's positioning makes it very hard for her to avoid the aliens that appear and the strict time limit makes later levels increasingly frustrating to play.

SNES

■ This is easily the best version, even if it shares little in common with the movie. It features stunning environments, Ripley's animation is wonderful to behold and the mission-based structure of the gameplay ensures there's always something to do.

ARCADE

■ Created using Sega's System 32 hardware, *Alien 3: The Gun* is a slick lightgun shooter with a similar graphical style to *Jurassic Park*. Unlike its peers it's an on-rails shooter and is completely relentless. Aliens come at you thick and fast, giving you little time to think and less to react.



GAME BOY

■ This adventure is surprisingly good and really pushes the Game Boy. While there's still a fair amount of action, the focus is on exploration with Ripley having to find keys to access weapons. It's only downside is the ludicrous decision to not feature a password or save system of any kind.

CLASSIC MOMENTS

The Trap Door

» **PLATFORM:** ZX SPECTRUM
» **DEVELOPER:** DON PRIESTLEY » **RELEASED:** 1986

Berk's life is one of simple servitude. As the caretaker of the castle, his life revolves around taking care of the property and making sure his master, The Thing Upstairs, is happy. The Thing Upstairs is a demanding sort of chap, though. Often heard and never seen, he is constantly demanding that Berk perform chores and make meals. This time, he's decided that he wants some fried eggs.

How do you get fried eggs when there are no eggs in the castle? Well, you get some laid, of course. What that entails is letting the flappy-winged thing emerge from The Trap Door, then going and grabbing a bullet from the item room and placing it on the door. Activate the door, sending the bullet into the bird-thing's bum, and then follow it into the room to the right while holding a frying pan. It'll drop the egg straight in, thus giving The Thing Upstairs the freshest eggs imaginable. Now just get it heated on the stove, and you'll be a very useful Berk. *

MORE CLASSIC THE TRAP DOOR MOMENTS

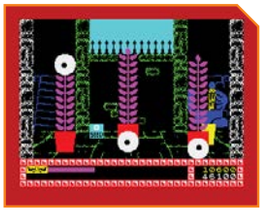
The Can Of Worms

Nobody wants to open a can of worms, and for good reason – they're a pain to get back into the can. Berk knows this all too well, as his first task from The Thing Upstairs is to get a can of worms – achieved by hunting the wiggly creatures down, then dropping them in. You'd think he could just buy a can…

Flamin' Heck!

The Green Thing, as we like to call it, is a bit of a jerk. It wanders around seemingly at random, stopping only to toast things occasionally, like poor Berk here. We'd never let it out of the titular Trap Door, but it is an essential part of making boiled slimies. Dropping a weight on it is thus incredibly satisfying.

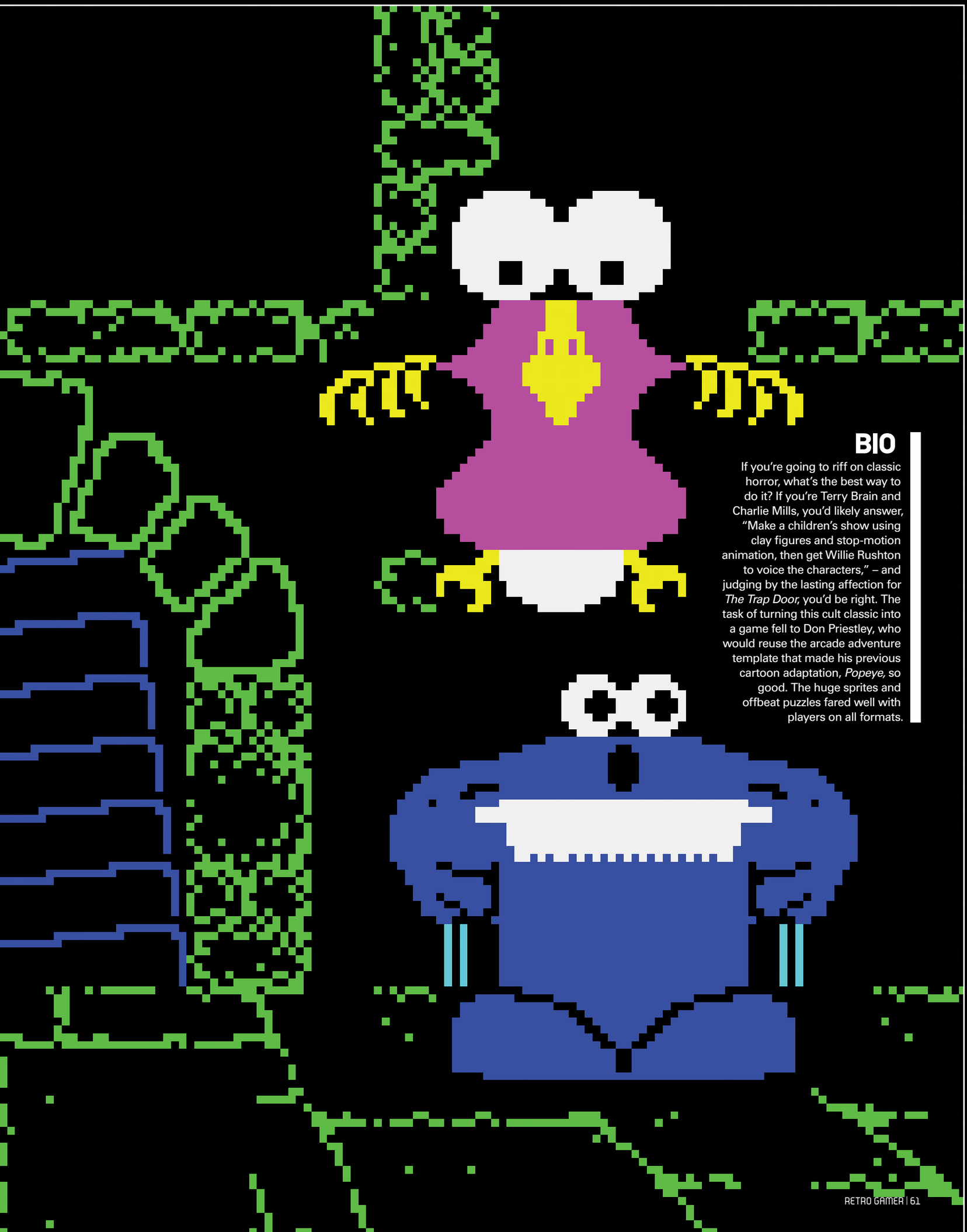
Grow Some (Eye)Balls



The Thing Upstairs wants a bottle of eyeball crush, and you're okay with doing the job – you just don't know where to get the eyeballs. As it turns out, you need to tip a packet of seeds out of a cup, then grow them in plant pots until they ripen and fall off. What an intuitive solution to a puzzle!

You're A Fool If You Dare

If you'd ever seen the TV show, you'd know the rule regarding The Trap Door – stay away from the thing, because there's *something* down there. But what if you *don't* heed that invaluable advice? Well, The Thing Upstairs chides Berk for being suicidal and the game is over. Finally, the question gets a definitive answer.

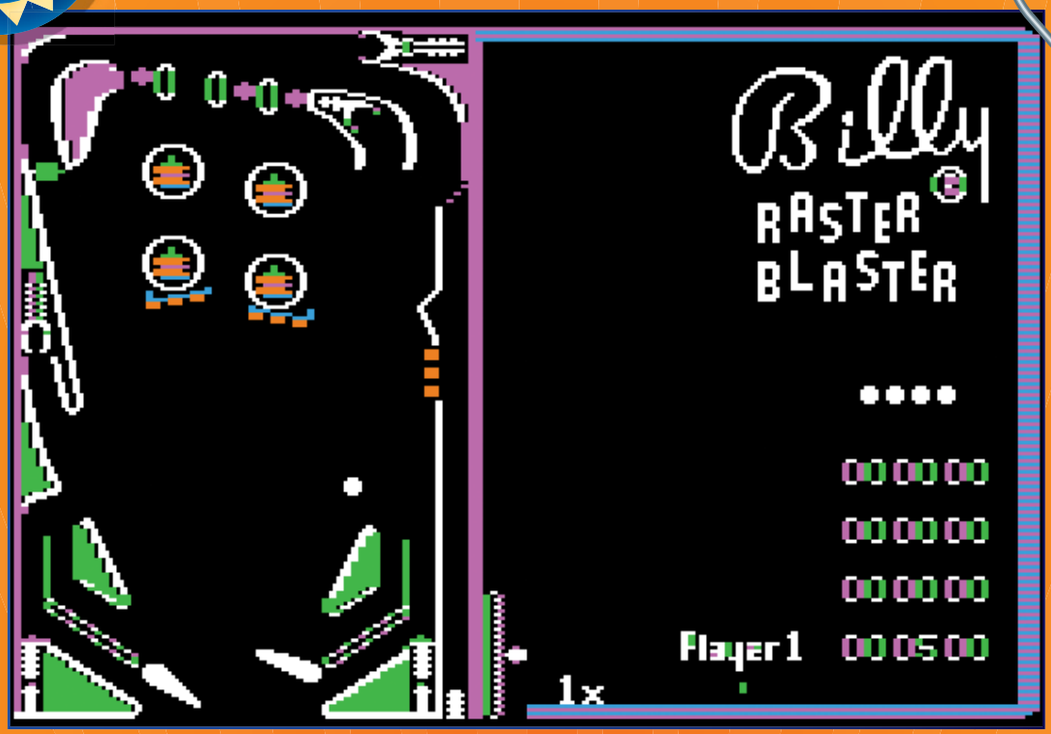


BIO

If you're going to riff on classic horror, what's the best way to do it? If you're Terry Brain and Charlie Mills, you'd likely answer, "Make a children's show using clay figures and stop-motion animation, then get Willie Rushton to voice the characters," – and judging by the lasting affection for *The Trap Door*, you'd be right. The task of turning this cult classic into a game fell to Don Priestley, who would reuse the arcade adventure template that made his previous cartoon adaptation, *Popeye*, so good. The huge sprites and offbeat puzzles fared well with players on all formats.

THE BLUFFER'S GUIDE TO PINBALL

Frequently unappreciated, pinball has received a new lease of life in videogame form, whether creators experiment with the genre or simulate the classics. We explore the best of pinball with the help of those who fashioned some of the best titles around



» [Apple II] Unlike earlier efforts by others, Bill Budge's Raster Blaster felt close to proper pinball on a home computer.

To the uninitiated, anyone playing pinball must look crazy, staring at a table of blinking lights, smacking metal balls about, but for aficionados, pinball is gaming magic. "While early arcade games were amazing, they were still essentially TV screens, but pinball drives your emotions at a higher level," reasons Mark Cale, who's been happily immersed in videogame pinball for years through his company System 3. "Also, many of the classics just never age – they are still works of art all these years later."

Mark's not alone in his love for this relatively niche genre. *Pinball Dreams* cocreator Andreas Axelsson loves the honesty of pinball: "It's you against the ball, unlike in videogames were it might be you against an algorithm that may tweak the difficulty based on how you're doing." Adrian Barritt of *Pro Pinball* fame says, "The notion of trying to control chaos really appeals," coupled with the "amazing audio and visual feedback you get when collecting a jackpot, which can give you an amazing buzz".

Elsewhere, pinball creators are keen to stress that modern tables in particular have moved far beyond the basics, often offering a depth that isn't immediately apparent. "Many tables have tremendously deep rules that take a long time to figure out," explains Mike Lindsey of *Pinball Arcade* developer FarSight Studios. "You can play for months and still not know them all – and the greatest part is that they are all different." According to Truls Bengtsson, cocreator of *Atomic Pinball*, this depth combined with a simple concept (smacking a ball around a sloped table with flippers) makes for "great entertainment", and "an excellent platform on which to develop a progressively more complex system". He says it's "easy to start with simple physics – a surface and a sphere – and then gradually extend and improve".

BACK TO BASICS

From a videogame perspective, basic is certainly how things were in the early days. Although technology enabled real-world pinball to become increasingly complex and elaborate, late Seventies and early Eighties tables still look fantastic, boasting an excitingly physical feel during play. By comparison, early videogame pinball was severely limited by the technology of the day.

In the arcades, a few fairly halfhearted efforts appeared, such as *Gee Bee* – a mash-up of pinball and *Breakout*, its most notable claim to fame is being designed by the man who'd subsequently create *Pac-Man*. In the home, most efforts were similarly risible, with the likes of *Video Pinball* providing something that wasn't as exciting as many videogames of the time, but that also didn't feel a great deal like pinball.

Things changed when Bill Budge decided he wanted to create a new game on the Apple II. Despite ▶

» [Atari 2600] Arcade Pinball: pinball as reimagined in Lego and played on the moon.

CONSTRUCTION TIME AGAIN

The mini-Making Of Pinball Construction Set and Virtual Pinball

Having completed *Raster Blaster*, Bill Budge wanted to follow up with something amazing that wasn't "just another pinball or a clone of some other videogame". He hit upon the idea of a construction set, so players could make their own tables. "It was helpful to start with the pinball simulation, math libraries and graphics libraries I'd written for *Raster Blaster*, but my hand-coded table scheme wouldn't work, since table layouts weren't known in advance," recalls Bill. Hence, he spent plenty of time figuring out ways to solve "ball leaking and sticking problems that had bedevilled me on *Raster Blaster*", and scouring college bookstores for tomes on computer graphics.

Regarding components, some were obvious – balls, flippers and walls – but others were more fanciful, such as a ball-grabber. "And each part required separate code to handle its behaviours," says Bill. "The ball grabber was complicated, because it enabled multi-ball play, which had repercussions in lots of other places in the code."

With some samples created to "show off what could be done with the editor" and Bill noting he "much preferred working on the program to the tables", he figured *Pinball Construction Set* would be the end of his time on pinball games; players could now make their own, and he wasn't interested in creating more. But years later Bill got back into games. Working at EA on the Mega Drive, he figured it might be fun to port his construction set to the console. "It was a complete redesign, which I wrote on vacation, while visiting my wife's family," remembers Bill. "Sega's hardware allowed me to do a much better simulation, with very fast graphics."

The console also provided room for fun additional elements: "We made the tools 'robotic', with simple animations, so the user could 'weld' shapes while building. Erasing things made them explode!" Through young artist Nick Corea, the game received skins, transforming flippers and tables into bones and flesh, industrial machinery, and gaming tables. "But it was misunderstood by critics, and compared to other pinball games," laments Bill. "Still, I was really proud of how it turned out."

> **"It was challenging to make the game fun and prevent the ball from 'leaking' off the table"**
>
> Bill Budge

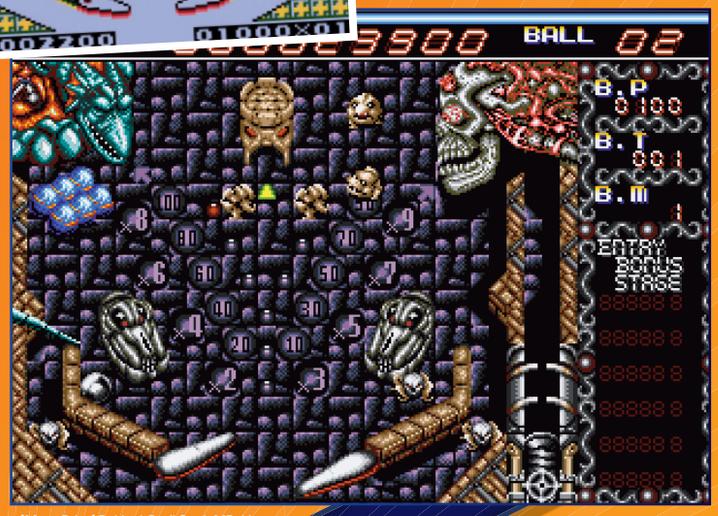
▶ having never really played pinball, his friends at Apple were obsessed and explained the game. "I'd just learned 6502 assembly language and how to make graphics faster on the Apple II, and pinball seemed an ideal match for the machine's capabilities," he explains. "There weren't too many pixels to change between frames, and the physics could be fairly easily simulated."

Inspired by the Williams *Firepower* table, *Raster Blaster* arrived to great critical acclaim. It was a battle to get it working, though. "The hardest part was collision detection and response. I built by hand a database that represented the board. For each row of pixels on the screen, it had a list of wall positions and their material and rotation relative to the x-axis," recalls Bill. "Collision detection involved using the ball's position to look up nearby walls. It was challenging to make the game fun and prevent the ball from 'leaking' off the table or getting stuck to a wall. My hand-coded table scheme accounted for half of the effort to build the game!"

TIME TRAVEL

Bill's follow-up, *Pinball Construction Set*, was a similarly conventional title, and this desire to produce something akin to real-world pinball pervades all the way to the present. But the Eighties also saw the beginnings of experimentation with the genre's form. Early attempts include *Slamball* on the C64, which features a ball being thwacked about a smoothly scrolling several-screens-high table. The end result feels as much like a platform game as a pinball title. Elsewhere, Sega's *Time Scanner* used ramps and tubes to enable you to blast the ball between tables. Being an arcade game, it also considerably ramped up the visuals, which would provide a foundation for much of the next chapter of the genre.

The late Eighties and early Nineties provided perhaps the most fondly-remembered pinball videogames as far as retro gamers are concerned. Gone were the sparse, simple tables found on 8-bit machines, replaced by rich, diverse playfields. With *Alien Crush*, *Alien*-esque imagery abounds, your ball being used to fend off hordes of monstrosities that



» [Mega Drive] Dubbed *Devil Crash MD*, this was a stunning conversion by Technosoft.

» [iOS] Pinball Dreams, reworked for iOS, shorn of the scrolling and with alternate graphics modes.

are reminiscent of H.R. Geiger's horrific creations. Sections where you smash the ball at dozens of roaming beasties recall arcade shooters and are a world away from anything that exists on a real table. Even some ports succumbed to this mentality, the NES conversion of *Pin Bot*, perhaps unwisely, added moving targets to the original table's layout – much to the chagrin of purists!

For Adrian, the accuracy and abstract routes both offer equal validity, but he argues it's always "key to focus on quality before quantity". This was always at the back of Andreas's mind when working on *Pinball Dreams*, now regarded as an Amiga classic. "Our goal was to get the physics as close to a real table's as possible. In fact, we didn't do anything else until the physics felt good," he asserts, adding that the first prototype was just a flipper and a ball in a monochromatic bowl on a single screen. Then, when working on themes for the game, the rule was to create only what you could build a mechanical version of.

"Our inspiration was existing videogame pinball and real tables. We figured the former could be vastly improved on, and we liked the idea of playing our own take on the latter all day for free," jokes Andreas. Since the Amiga had plenty of horsepower, you could "fool yourself into feeling it was almost like the real thing", and some 'noise' was added to the system to ensure no two games were entirely alike. Sequels soon followed, *Pinball Fantasies* being a "benchmark for 2D pinball", according to Adrian, and the inspiration that would later find his own team trying to take things further and into the third dimension.

A BIT PC

But 2D wasn't entirely done. Over on the PC, James Schmaltz was looking for a new game to make, and figured pinball simulation was achievable within a year. "*Pinball Fantasies* and *Eightball Deluxe* were an inspiration, and I strove to make my game realistic, and more fun than frustrating," says James on what would become *Epic Pinball*. The big draw in his game was the shift to a shareware model, giving the first table away for free.

Epic's many tables had no particular method behind their design: "I'd come up with an idea and implement it. I was mainly doing it for me and what I enjoyed, and would just try to do something different each time." But despite the massive increase in computing power since Bill Budge's days, James reveals the same problems remained: "One challenge was ▶

TIMELINE

1700s Billiard tables are narrowed, players 'shoot' balls to hit fixed targets. This becomes bagatelle.

1871 Inventor Montague Redgrave patents the spring launcher, which will be instrumental in pinball.

1933 Electric lights and active bumpers are introduced as modern pinball begins to take shape.

1947 Gottlieb's *Humpty Dumpty* adds player-controlled flippers, designed to add skill.

1975 *The Spirit of '76* is released the first microprocessor-controlled pinball table.

1978 *Video Pinball* brings pinball to the home market. It's later converted to the Atari 2600.

1978 *Gee Bee* (and later *Cutie Q*) finds Namco mashing up pinball and *Breakout*.

1981 Bill Budge's *Raster Blaster* arrives for the Apple II, becoming the benchmark for home pinball.

1982 *Raster Blaster* gets its first home-gaming challenge in the shape of *David's Midnight Magic*.

1983 Bill's *Pinball Construction Set* enables gamers to build their own tables inside an Apple II.

1984 *Slamball* for the Atari 800 and C64 expands pinball beyond a single screen, with a tall scrolling table.

1987 Sega's *Time Scanner* adds the gimmick of using ramps and tubes to move between multiple tables.

1988 *Alien Crush* fuses pinball with multi-screen Gigeresque tables featuring gruesome moving targets.

1990 A port of the *Pin Bot* table arrives on the NES, although added enemies and hazards irk.

1992 *Pinball Dreams* is released for the Amiga to critical acclaim, offering four large themed tables.

1993 Shareware title *Epic Pinball* thrills PC users, with a dozen distinct and highly playable tables.

1993 Sonic briefly becomes a pinball and blatted around Doctor Robotnik's pinball fortress.

1996 The web kicks off the four-entry *Pro Pinball* series, each offering a highly detailed table.

1999 Aiming for an crossover of pinball nuts and card collectors, *Pokémon Pinball* arrives on GBC.

2000 The *Visual Pinball* freeware game engine for simulating classic and user-created tables is launched.

2002 *Pinball Of The Dead* on the GBA oddly merges pinball with thwacking zombies with balls.

2004 FarSight's *Gottlieb Collection* arrives, testing the water for 2012's *The Pinball Arcade*.

2005 *Metroid Prime Pinball* adds wall-jumping and weapons to the pinball mix on the Nintendo DS.

2007 Zen stakes its claim to pinball with Xbox 360 release *Pinball FX*. It soon adds licensed themes.

2008 *Zen Pinball* is released. Its tables become increasingly elaborate over time.

2009 Gameprom's *Wild West* continues pinball's mobile renaissance.

2012 *The Pinball Arcade* begins its audacious project to rework dozens of real-life tables for virtual play.

2016 *Ink* rethinks pinball on iOS as a series of bite-sized puzzles with a splash of abstract art.

getting the ball to bounce against the flippers realistically. There just wasn't a lot of programming power to work with, and so the physics is a complete hack, and the equations had very little to do with actual physics!"

But as PCs grew more and more powerful, 2D was clearly on borrowed time. Although 2D games in the pinball genre would live on, they mostly did so in crossovers with arcade fare, a memorable example being *Sonic Spinball*, with the blue hedgehog periodically turning into a furry ball you could belt about Doctor Robotnik's suspiciously pinball table-like fortress. Elsewhere, the desire for a more realistic game meant 3D viewpoints and a change in thinking. When Andreas reworked *Pinball Dreams* tables for 3D in *True Pinball*, he suddenly discovered design flaws: "Sometimes, it was hard to fit things in when they went beyond 2D, so we'd have to move or change ramps, because they'd be too steep. The physics also needed updating to work properly." Now, it really was a case of designing what you could

» [iOS] New pinball games, such as *Inks*, take the basic concept of pinball and make it something new.

ESSENTIAL PINBALL VIDEOGAMES

DEVIL'S CRUSH

PC ENGINE/MEGA DRIVE, 1990

■ The second entry in the *Crush Pinball* series, *Devil's Crush* has you spanging balls about scrolling tables infested with skeletons and demons. Although standard pinball controls and components are present and correct, *Devil's Crush* has a distinctly arcade-oriented sensibility, charging you with hitting plenty of moving targets roaming about.

SLAM TILT

AMIGA/WINDOWS PC, 1996

■ Any of the earlier entries in the DICE series of pinball games – *Pinball Dreams*, *Pinball Fantasies*, *Pinball Illusions* – are worth a shot, but *Slam Tilt* feels like the pinnacle of its old-school 2D pinball titles. Like its predecessors, tables are several screens high, smoothly scrolling to follow the ball, and they feature a good range of themes, from pirates to the space age.

PRO PINBALL: TIMESHOCK!

VARIOUS, 1997

■ The *Pro Pinball* series features some of the best ever realistic 3D tables created for PCs. *Timeshock!* is widely regarded among pinball aficionados as the best of them, with a near-perfect balance of stunning visuals, smart rules, and fast-paced gameplay. Fortunately, it's also now available for Android and iOS, in remastered form.

ZEN PINBALL

VARIOUS, 2008

■ With a hyper-real take on pinball, *Zen Pinball* marries solid physics with gigantic selection of tables that come to life in unique and interesting ways. In the excellent *Star Wars* tables, you may find yourself staring at a lightsaber duel; elsewhere, you fend off aliens, or deal with all manner of comic-book capers in the many Marvel tables.

PINBALL ARCADE

VARIOUS, 2012

■ Instead of original fare of videogame pinball, *Pinball Arcade* takes a different approach by seeking to simulate real-world tables, giving anyone the chance to pay a few bucks for infinite plays on tables that are based on classics such as *The Addams Family*, *Black Knight*, *Ripley's Believe It or Not!*, *Star Trek: The Next Generation* and many more.

actually build. But he says 3D clearly boosted the genre: "By tilting the table, you don't have to scroll so much, and so you get a better overview, especially during multi-balls. It also exposes the more mechanical nature of pinball compared to a pure top-down view."

[DOS] *Pinball Fantasies* improved on *Pinball Dreams*, inspiring a new generation of pinball creators.

GO PRO

As noted, Adrian had been inspired by *Pinball Dreams*, but was determined to "create the most realistic 3D simulation possible," including the visuals, physics and rule sheets. He mulls *Pro Pinball* was perhaps the first game to really succeed at doing this, despite his common complaint of the "hardware being limited at the time". The team used tricks to get the game running on low-end PCs and played background music directly from CD to avoid tying up the hardware. This left space to refine and implement the physics. "We wanted to match the feel of a Williams table, which meant simulating things like the power and holding coils, the way a flipper bends as it hits the end stop, and how a flipper behaves when returning to rest, allowing you to perform accurate drop catches," he says.

No real effort was made to make the game approachable – instead, *Pro Pinball* went all-in on a realistic experience (with only a single table per release), reasoning a hardcore audience would exist and relish the challenge: "Then – and now, with the mobile remasters – *Pro Pinball* was about catering for those who wanted a convenient simulation experience. The series pays homage to the beauty and inventiveness of real pinball machines."

If anything, subsequent years saw the gulf between strands of pinball become even more pronounced. On mobile systems, evolving – but still the equivalent of several generations behind cutting-edge computing and console hardware – there was a tendency towards playable, accessible pinball-style games, often utilising well-known characters. Impulse purchasers wouldn't necessarily be sucked in by the idea of pinball, but by a new game featuring *Pokémon*, *House Of The Dead*, *Kirby*, *Metroid* or *Pac-Man*. On the PC, games tended to favour the more hardcore pinball nut, as evidence by *Visual Pinball*, a Windows-based system that's part-simulator, part-editor.

In an interview with Noah Fentz for VPForums.org, creator Randy Davis revealed *Visual Pinball* arrived from his work on Microsoft Office Web Components, which he described as "ActiveX controls designed for developers to place into their own apps, and which had COM interfaces to allow them to talk to each other and to other components". Adding that "some percentage of my brain is always devoted to turning everything into a game". Randy said it occurred that "ActiveX controls being standalone objects but communicating with each other was a lot like pinball, where you had individual switches and lights that acted as lone objects but could communicate, with logic to tie everything together". *Visual Pinball* is therefore essentially "a bunch of ActiveX objects you create that talk to each other via VBScript, with a fancy 3D presentation layer".

> **"Pro Pinball was about catering for those who wanted a convenient simulation experience"**
> Adrian Barritt

The system spread much more rapidly than expected, the first table arriving only a couple of hours after the initial release. Since then, a vibrant community and integration with Visual PinMAME has found *Visual Pinball* able to replicate a slew of user-created and real-world tables with some degree of authenticity, the latter inspiring some people to build pinball cabinets with *Visual Pinball* inside. "I think that's great because it's back to pinball being physical," Randy told Noah.

RENAISSANCE

Given *Visual Pinball*'s tendency towards physical controllers, it's odd to realise the most recent pinball videogame rebirth has largely occurred on touchscreens. Although some popular apps started life elsewhere, the iPhone and iPad – and eventually Android – helped an exciting diversity and energy return to pinball.

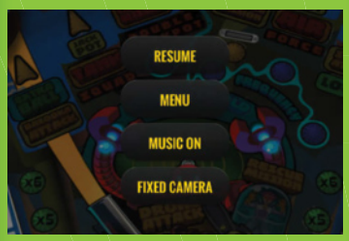
In part, this is down to form factor. Touchscreens provide displays with the best orientation for traditional pinball – portrait – rather than squeezing tables into landscape slots, either by ▶

» [Mega Drive] Sonic in *Spinball* allows himself to be smacked by flippers, all in the name of defeating his nemesis.

» [iOS] *Wild West* by Gameprom was created despite the developers having no first-hand experience of pinball!

TURNING THE TABLES

Videogame pinball tricks beyond reality



PAUSING A GAME

It might sound obvious, but there's no pause button in real life (sadly), but there is in many pinball games. This means if your arms are aching during a marathon session, you can nip off for a quick break and return with limber muscles.

MULTIPLE TABLES

Okay, in theory some smart person could probably build something akin to *Time Scanner* and its ilk, but it'd be almost impossible to play and a nightmare to store. Hence you being stuck with single-table games in the real world.

STOMPY FIGURES

***Zen Pinball* in particular has a penchant for having animatronic-style characters mooching about its tables. Perhaps this'll be possible for real life tables in the future, but these tables, at most, have comparatively basic moving parts and figures.**

INVADERS-STYLE MOVING TARGETS

The mechanics of a real-life table place major limitations on what can be achieved. In videogames, the sky's the limit. Even fairly early games featured aliens dive-bombing the ball, like they'd got horribly lost from a *Galaxian* machine.

WEIRD VISUAL DESIGN

Inside a computer, you can make pinball look like anything, as evidenced by the paint splats of *Inks*, and Sonic turning into a ball and racking up points. Try putting a hedgehog in a real table after painting it blue! It gets really angry!

▶ scrolling or extreme tilting. But the relative openness and ubiquity of the platforms has also worked wonders for creators.

Zen Pinball and *The Pinball Arcade* are the most prolific mobile pinball titles. The former provides a hyper-realistic take on pinball, utilising dynamic animated, interactive components; the latter accurately recreates real-world tables in virtual form. Zen's VP of publishing Mel Kirk nonetheless notes *Zen Pinball* arrived from the desire to "create an authentic pinball experience," because in the mid-Noughties "pinball had died a bit, and we wanted to revitalise it".

Studio head Viktor Gyorei explains that early Zen tables "were created that could be built in reality, to best represent that old-school flavour". But he adds pinball videogames aren't just pinball games – they're videogames, too. Hence, the team started experimenting with features that aren't common in real-world machines, to "narrow the gap between retro pinball and current videogames". Positive responses drove further additions, a boon when Zen incorporated licensed properties into its designs: "It's way more fun to see and control detailed 3D characters than have some 'cardboard' targets and static toys on a table!"

Pinball Arcade was also driven by a solid passion for pinball. Mike notes the earliest gamers were American pinball wizards, eking out as much playtime as possible from a single quarter. Almost the antithesis of Zen, *Pinball Arcade* remains about recreating that magic of old as accurately as possible. "We buy and disassemble an actual table, take high-resolution images of the bare playfield, and model all the toys and ramps in 3D," explains Mike. "Our emulation engineer ensures the original ROM is running and controlling every aspect of the virtual table, just as it does in its physical counterpart. All of the sounds are extracted and integrated so the ROM can call them when needed. We then reassemble the table and tirelessly play both versions, to tune our physics and ensure the rules are as accurate as possible."

THE NEW BREED

Independent developers have also been bitten by the pinball bug. Sergey Volskiy fondly recalls his time at Gameprom. The Ukraine-based developer wanted to create something realistic, despite the team having never experienced

» [PC] *Pro Pinball*: The web kicks off the excellent *Pro Pinball* series in style.

WHAT MAKES A GREAT PINBALL GAME?

ANDREAS AXELSSON (PINBALL DREAMS)

■ "A good pinball videogame must have good physics. It's the core of the game. Without that, it can only be a pale shadow of the real thing."

JAMES SCHMALTZ (EPIC PINBALL)

■ "There needs to be lots to do on the table, the game itself must be fairly easy for players to figure out, and all the shots must be reasonably easy to hit."

BILL BUDGE (RASTER BLASTER)

■ "A pinball videogame should push to do things that regular pinball machines can't, such as morph or animate the table, or have 'impossible' physics that aren't possible in real life."

TRULS BENGTSSON (ATOMIC PINBALL)

■ "Playfield lighting and sound is important to indicate what a player should do and when, especially on small displays that lack the cognitive real estate of full-size tables.

LUKE WHITTAKER (INKS)

■ "It needs to look beautiful, although not necessarily realistic. Visual inspiration can equally come from artists such as Jackson Pollock and Bridget Riley."

» [PC] Zen Studios make brilliant licensed tables. This is based on *Aliens*.

> **"Playing a pinball videogame on an iPad is a better fit than on a console or PC"**
> Truls Bengtsson

actual pinball before: "We wanted the best graphics, and lots of details for the tables. But when we used real physics, the game felt too hard, so we decreased the angle of the flippers, helping players last for longer and discover table features."

By contrast, *Atomic Pinball*'s Mikael Peterson "really loves old physical tables", and aimed to make a new one, "with an original story, flirting with nostalgia, but utilising a modern style of graphics". Truls concurs that "playing pinball on an iPad is a better fit than on a console or PC," although jokes it'd be better if the iPad was "40 inches long" for a truly authentic table size.

Elsewhere, some developers continue to play around with the mechanics of pinball. Recent iOS release, *Inks,* reworks pinball as a puzzle game. Each table is about hitting paint targets with the fewest ball losses, creating abstract, and sometimes beautiful, digital canvasses as the ball rolls through digital pigment. "We wanted to capture that mastery over a simple mechanic that's at the core of pinball," says Luke Whittaker of his team's game. "But also there's the beauty of tables, especially those from the Fifties and Sixties, which were more graphic, and yet simpler in their aesthetic than modern tables, before airbrushing and Photoshop took over".

In distilling the essence of pinball in *Inks,* and making its core mechanic approachable rather than doubling down on hardcore fans, there's a possibility the game could open up pinball to a new generation. For the future, Luke hopes other developers will similarly look for new ways to innovate around the mechanics of pinball, trying something new, rather than sticking with the tried and tested.

Whether that comes to pass remains to be seen, of course, but one thing's for sure: because of videogames, pinball is here to stay. For Mark, this almost feels like a validation: "Many people are now enjoying casual gaming experiences, and the idea of keeping a ball in play and scoring points means pinball is something that everyone can play if they've a spare five minutes or so." And as hardware becomes more powerful, this provides scope for more accurate simulation and further experimentation. "I think the lines of digital and physical pinball will continue to blur," affirms Mel. "Machines will be connected to mobile devices, physical machines will operate quite differently, and Virtual Reality will offer a level of immersion that makes you feel like you're playing a real table again." *

» [Various] *Pinball Arcade* lets old pinball games to live on, recreated in videogame form.

BIG F

SOFTW

Big Five Software is best known for one game, the seminal Miner 2049er – a title that famously inspired none other than Manic Miner. But there was far more to the Californian company than just one game as Kieren Hawken discovers…

Let's start at the very beginning and introduce the man who became the number one in Big Five Software, Bill Hogue, and find out just how his venture into the games industry started. "One of my first ever jobs was at a Radio Shack. While there I persuaded my manager to order a TRS-80 computer that we could keep in store on display. It took a lot of whining because managers could only keep so much inventory in stock at one time, and he probably would have preferred to keep a few more CB radios on the shelf instead of an expensive computer." This job led Bill into a chance meeting with the man who would become his partner in the company, Jeff Konyu. Bill remembers this encounter well, "One day Jeff came in to buy some electronic parts. Well, I'm fairly certain he came into actually buy something, rather than him being one of the steady stream of people who came in to get their free battery of the month! I was playing with our store TRS-80, which he was very interested in, and we got talking. It all went from there really." So how did Bill get started in programming? "I had first played with a TRS-80 in high school, so I was already familiar with the machine. Between customers at the shop I would try my hand at writing programs in BASIC and later in assembly language. If I remember correctly the debugger was called 'Z-Bug' or something like that. I remember being completely baffled as to how to use it when it arrived in the store!"

Initially the company was operated out of Bill's own home, he and Jeff had written a couple of games but now needed to make some money and actually sell them. Getting your games

» [Atari 8-bit] *Miner 2049er* for the Atari 8-bit computers was the title that put Big Five on the map.

BIG FIVE SOFTWARE

out there was a fairly hard thing to do in the early Eighties, there were no distribution networks or chains of stores for videogames, they were still a very new thing, so Bill turned to the new computer magazines that were popping up all over the place. "I started by placing ads in a few magazines. Initially they were just small ads but later as sales got better we were able to afford full-page ads. The later ones were even in full colour! Most of our orders back then would come in the mail by people sending us cheques. We even took credit cards over the phone later as we got bigger. At first it was something that we could handle out of my bedroom, but we soon leased an office in Van Nuys, California, when things really got rolling." So why Big Five? Where did that name come from? "The name comes from my junior high school when I and four other friends were in a television production class," explains Bill before reminiscing further. "We had cameras, video tape machines and even a special effects switcher that could perform limited wipes and dissolves. My friends and I called ourselves the 'Big Five' from that class. We were the technical group behind the cameras. The better-looking kids were the talent!"

> **"One of the games that came out in the arcades back then was Donkey Kong. We wanted to do our version of that"**
> Bill Hogue

Many of the games that Big Five produced for the TRS-80 were clones of existing arcade games and it's clear that these coin-ops were a big influence on Bill. "Jeff Konyu and I used to play videogames at local arcades all the time," he explains. "I remember there was a real cool one in Westwood especially. We also used to take trips out to a miniature golf centre in Riverside, which had a large arcade, it always had the latest games. So, of course, our games were patterned after the stand-up arcade games that we were pumping quarters into." But making copies of other people's games was not the only thing Big Five did, it also came up with more than a few unique creations of its own. One of the most notable of these was getting the humble TRS-80 computer to output sound "Jeff and I went to a videogame convention in New York and I remember seeing a skiing game there that had voice sound." Bill recalls "After seeing (and hearing) that game I began working to see how I could put voice effects into our games. In fact to this day I still own a vintage *Black Knight* pinball machine, I always loved that game because it was one of the first pinball machines to have voice effects included." Big Five also came up with its own joystick for use with its games as the existing ones didn't do the job required. Bill remembers how this came about. "There was a company based in New York called Alpha Products that approached us about modifying our games to work with a joystick they wanted to produce. We did modify our games but we later decided to get ▶

» This is the first office to host the Big Five Software team, situated in Van Nuys, California.

» Bill Hogue counts up the cash made from sales of Big Five games at an expo.

INSTANT EXPERT

- Big Five struck a deal with Radio Shack for it to produce compilations of Big Five TRS-80 games to be sold alongside the machines in stores.
- *Miner 2049er* was voted Electronic Game Of The Year in 1984.
- Most of Big Five's TRS-80 games were clones of early arcade games.
- *Bounty Bob Strikes Back* was voted the 19th best ZX Spectrum game of all time by *Your Sinclair*.
- The Atari 2600 got two different versions of *Miner 2049er* because all the levels wouldn't fit on one cartridge.
- Big Five managed to not only get the TRS-80 to produce sound effects but also digitised speech.
- Unhappy with the joystick options available for the TRS-80, Big Five created its own model.
- US Gold licensed and republished Big Five's games in Europe.
- *Miner 2049er* was famously the inspiration for the seminal *Manic Miner* on the ZX Spectrum.

TIMELINE

1980
- Big Five Software is officially formed in Van Nuys, California by Bill Hogue and Jeff Konyu.
- The company has its first big hit with *Super Nova* for the TRS-80.

1981
- Due to rapid success the company moves to much bigger offices and takes on additional programmers.
- The Trisstick is developed, a modified Atari joystick for the TRS-80 specifically designed for Big Five's *Berzerk* clone, *Robot Attack*.

1982
- Jeff and Bill both appear on TV show *Good Morning America* talking about their successful videogames.
- Big Five's biggest hit *Miner 2049'er* is released, initially for just the Atari 8-bit computers.

1983
- *Miner 2049'er* sequel *Scraper Caper* is announced and even advertised before being scrapped altogether.

1984
- Another sequel is developed in the form of *Bounty Bob*, this is also canned after technical problems.
- As the many ports continue, *Miner 2049*er wins electronic game of the year.

1985
- *Miner 2049*er eventually gets a sequel in the form of *Bounty Bob Strikes Back*.

1986
- With the lease running out on their offices and a huge decline in sales, Bob moves Big Five to his spare room before closing it down completely.

1991
- Mindscape releases a new and enhanced port of Miner *2049er* for the Nintendo Game Boy.

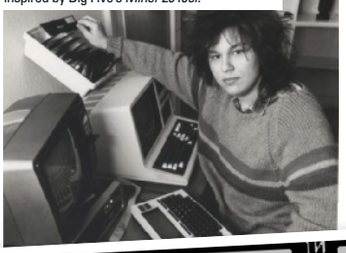
2007
- *Bounty Bob* makes a comeback with a release for J2ME based mobile phones.

2010
- *Miner 2049er* is remade for iOS including both new and classic versions of the game.

into the hardware business ourselves and do it properly, thus the Trisstick was born! It was actually me who soldered and built the first prototypes. I was always playing with electronics since I was a kid. A place called Heathkit was like a toy store for me, I built all sorts of kits from clocks to televisions."

Seeing that the TRS-80 market was declining due to the more advanced machines coming on to the market, Bill and Jeff decided that they should move onto a new platform and they were particularly attracted to the Atari 400 and 800 computers. We were keen to know why they were so interested

» Matthew Smith's seminal *Manic Miner* was inspired by Big Five's *Miner 2049er*.

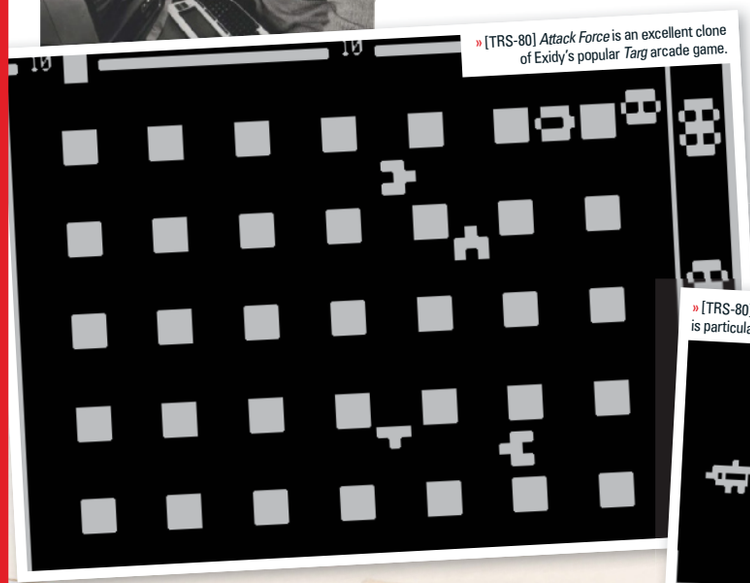


> **"I wanted to pack as much colour as possible into this screen. In fact I wanted more colour than was actually possible on the Atari"**
> Bill Hogue

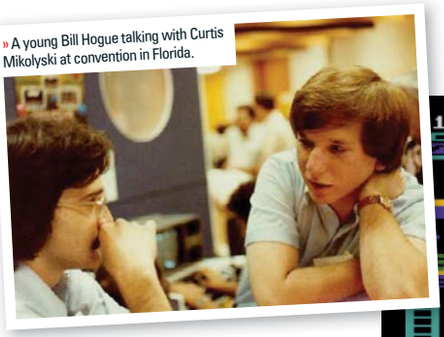
in the new systems. "Colour! Lots of colour," Bill enthusiastically adds. "The Atari computers also had great sound, too. They had the magic chips inside for those functions, I remember those chips were called 'GTIA' and 'POKEY'. I even named one of my dogs Pokey I liked those chips so much! I also liked the fact that the Atari had cartridge slots so we could release products that couldn't easily be copied. For *Bounty Bob*, with the bank selected 40K ROM, it was nearly impossible to copy to disk. I tried to use every bit of colour I could on that system. I'm still quite proud of how I was able to scroll between screens on *Bounty Bob* when there seemingly wasn't enough RAM to draw two screens at once. Programmers today would probably have no idea of how to fit an entire game into only 40K (or less) of code space." We had to ask Bill what it was like transitioning from the TRS-80 to the Atari hardware given that they were so different. "Well, of course, I had to learn all the new opcodes for the 6502 microprocessor. In many ways the Z80 was the better CPU. But I guessed I found how to live without the LDIR instruction! But all of the techniques for manipulating little pixels on a TV screen were the same. It's just that now I had colour and proper sound to play with!"

With the advent of the Atari came a new style of game for Big Five, something it had never done before. Once again Bill turned to what he knew for inspiration. "One of the big games that came out in the arcades back then was *Donkey Kong*. We really liked the climbing concept and wanted to do our version of that, but felt we could also improve it in many ways."

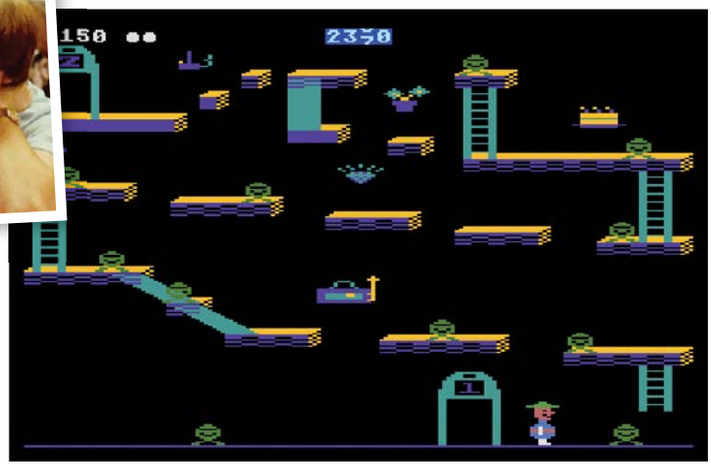
» [TRS-80] *Attack Force* is an excellent clone of Exidy's popular *Targ* arcade game.



» [TRS-80] One of Big Five's lesser-known games, *Weerd* is particularly notable for its use of digitised speech.



» A young Bill Hogue talking with Curtis Mikolyski at convention in Florida.



The technical abilities of the Atari computers were much lauded at the time and Bill really wanted to take advantage of this, especially after coming from the TRS-80. "I wanted to pack as much colour as possible into this screen. In fact, I wanted more colour than was actually possible on the Atari. If you look close you'll see at least 15 different colours on the screen at any one time, there were several tricks I used to achieve this. I guess I was a little obsessed with colour when *Miner* was programmed. All of my prior games were written for the Radio Shack TRS-80 model I, which had fairly limited monochrome graphics, so this is understandable." Going back to *Donkey Kong*, we had to quiz Bill on what he saw as upgrades on Nintendo's game. "*Miner 2049er* featured ten different levels for a start (as opposed to four) with many different kinds of special equipment available (as opposed to just one), Bounty Bob could use hammers, ladders, slides and even a cannon!" *Miner 2049er* went on to win a glut of awards including Electronic Game Of The Year in 1984. How proud was Bill of the success it achieved? "I couldn't have hoped for more. We both rented tuxedos for the event and party afterwards. I even remember spending quite some time stuck at the airport in my tuxedo with a nasty headache waiting for our return flight home." *Miner 2049er* ended up being licensed out to several companies for release on other platforms including Tiger Electronics, Micro Fun and US Gold in Europe and ended up being released for an incredible 22 different systems including a LCD handheld game, Bill was really pleased with how this turned out. "Just about every computer imaginable had a port. Barry Friedman of ICG did a terrific job licensing all those different versions."

The big question for Big Five now was how could it follow up the success of *Miner 2049er*? A sequel was the obvious solution as people were already wanting more. But Bill was quite reluctant at first to just do more of the same and was trying to come up with other ideas "The licensees of *Miner* were crying out for another game, so I worked with Curtis Mikolyski while we attempted to create an even better game than *Miner 2049er*. [The] problem was it was going to be pretty hard trying to top ourselves. So we came up with a vertically-scrolling game we called *Scraper Caper*. We did a fair amount of work on it. It had Bounty Bob leaving the mine and moving to the big city as a fireman. He'd also lost a little weight!" This would be the first of many ultimately failed ideas for the evolution of Bounty Bob, *Scraper Caper* even got as far as being advertised in magazines of the time as Bill explained further. "*Scraper Caper* was something I really wish I could have done differently. After *Miner* we wanted to come ▶

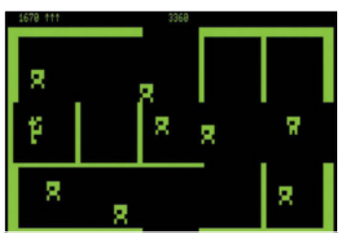
IT'S A STICK UP!

In 1981 Bill Hogue wrote *Robot Attack* for the TRS-80, an impressive clone of the Stern arcade game *Berzerk*. But he had one big problem, the existing TRS-80 joystick didn't allow to press fire and a direction at the same time. This was caused by the port being mapped so that fire was the same as up and down being pressed at once. So to solve this problem Big Five developed a stick of its own, which they called the Trisstick, along with its own interface for you to connect it to your machine. In essence it was basically just a modified Atari CX-40 but soon became the TRS-80 controller of choice after it was advertised heavily in magazines of the time. Due to this popularity it was soon supported by near enough every other publisher producing games for the computer, too, and not just Big Five.

DEFINING GAMES

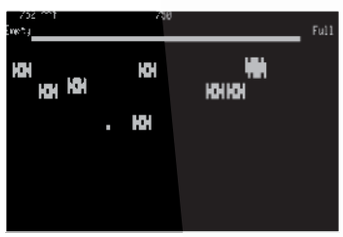
MINER 2049ER

■ This was by far Big Five's biggest hit and inspired numerous clones including the equally-famous *Manic Miner*. Originally released for the Atari 8-bit computers in 1982 it was ported to no less than 22 different systems! The game was inspired by the California Gold Rush of 1849, in which the miners were nicknames 49ers. It saw you take the role of Bounty Bob trying to recover all the gold from the ten different caverns. It was highly praised for featuring far more screens than *Donkey Kong* or any other similar platform game of the time.



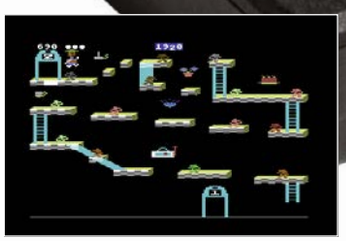
ROBOT ATTACK

■ When Stern unleashed *Berzerk* onto arcade audiences in 1980 it created a storm of interest. The game was hugely popular, won numerous awards and Atari soon snatched up the right for the home conversions. But this didn't stop developers creating their own versions of the game and *Robot Attack* for the TRS-80 is one of the best, especially when you take into account the huge limitations of the target platform. It might look a ugly with its blocky visuals but it plays like a dream and even has speech synthesis, just like the original coin-op.



COSMIC FIGHTER

■ Sega's *Astro Fighter* might not be one of its more famous games these days, but back in 1980 when it was released, it was massive hit. As well as a great sequel in the form of *Astro Blaster*, it also inspired Activision's Atari 2600 game *Megamania*. But that was not the only great clone out there, Big Five also released the excellent *Cosmic Fighter* for the TRS-80. This vertically-scrolling shooter has loads of enemies on the screen, great sound effects and compelling gameplay. *Cosmic Fighter* ranks as one of the best games of its type on the machine.



BOUNTY BOB STRIKES BACK

■ After several aborted attempts to give *Miner 2049er* a sequel, Big Five provided the goods in 1985 with *Bounty Bob Strikes Back*. Like the first game it started off life on the Atari 8-bit and was ported to a host of other systems in equally impressive style. In fact, *Your Sinclair* magazine voted it the 19th best ZX Spectrum game of all time. The game is more of the same but the level count has risen to 25, the graphics now have a pseudo 3D look to them and when you die you now continue from where you left off, making it a bit easier than its predecessor.

WHERE ARE THEY NOW

BILL HOGUE

■ Bill moved from games to more serious applications after Big Five, programming software for the healthcare industry. After this he worked for Technicolor, and also took up a similar role at Panavision some years later. He now works for Walt Disney R&D coding software for its animatronics. Bill still takes a keen interest in the gaming scene and he created the Big Five website with Jeff Konyu to catalogue the company's many achievements.

CURTIS MIKOLYSKI

■ Big Five graphics artist Curtis moved away from working on videogame titles such as *Miner 2049er* and *Bounty Bob Strikes Back* and applied his talents to television and movies after the demise of Big Five Software. He became a set designer in Hollywood and he has worked on such notable and popular productions such as *Parks And Recreation*, *Private Practice* and *Grey's Anatomy*. He is currently working on the TV series *Brooklyn Nine-Nine*.

JEFF ZINN

■ Jeff Zinn is currently the co-owner of Dream Builder Adventures, a company that organises outdoor events for children. Previous to this venture he also worked at Technicolor, for 28 years no less, in a number of different roles including being responsible for the production of IMAX film. Jeff did get back in coding more recently, however, he has produced several Android apps to complement his current business venture at Dream Builder Adventures.

JEFF KONYU

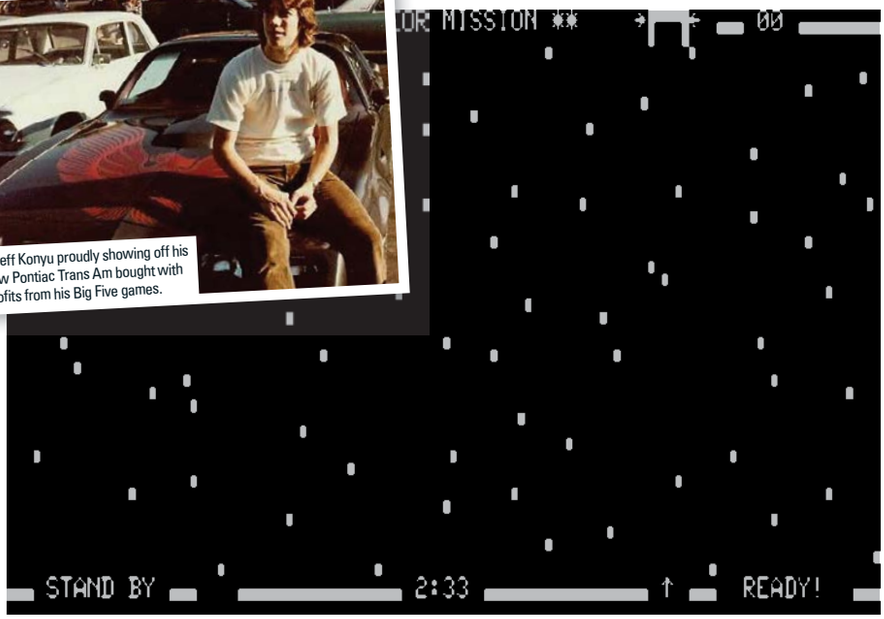
■ Another member of Big Five who left the games industry completely, Jeff now works as the webmaster for a large life insurance company. In between his time at Big Five and his new career, Jeff finished his degree in graphic arts and completed a degree computer science, too. Although no longer involved in the games industry, Jeff did help Bill create the Big Five website and is still very proud of all his achievements at the company.

▶ out with something that would have been an even flashier hit. The game started outside a tall building on fire. A hysterical woman would flag down Bob and give him instructions for going up to her apartment to save something valuable. Bob would salute and then he'd be under your control. You'd go in the automatic door at the base of the building and start exploring. Scott Ross, an artist who did work for us through International Computer Group, produced a very cool painting showing a transition for Bounty Bob from being a miner to a fireman which we used in the advertising." After this caper was indeed scrapped, Bill set to work on another even more advanced game that also went unreleased "So Curtis and I started on yet another variation. This time Bounty Bob was hopping around on three-dimensional framework with angry fireballs after him. That was probably the most sophisticated game display I had ever created. Getting all the mask priorities correct was pretty challenging. We ended up creating and scrapping two games that we really should have just finished," explains Bill. "I just wasn't happy with either of them at the time so that's how *Bounty Bob Strikes Back* came into being. I was too much of a perfectionist I suppose. Sadly there's no chance the code will ever see the light of day either, because I tossed it all out years ago. Very stupid…yes, I know."

So with the pressure building from Big Five's partners, a weight of expectation on Bill's shoulders and a lack of cash flow coming in Bill decided to just return to what he knew and go for a more traditional sequel, albeit with quite a few improvements. "In *Bounty Bob Strikes Back* we gave the mine a bit of a 3D look and added all sorts of new contraptions for Bob to use. I created a complete level editor for Curtis to use and he designed all of the levels this way. It was a big improvement from sketching levels out on graph paper as we had done previously." Sadly, despite widespread acclaim, *Bounty Bob Strikes Back* ended up being no where near as

» Big Five Software embraced advertising in magazines early, this one is for *Scraper Caper*.

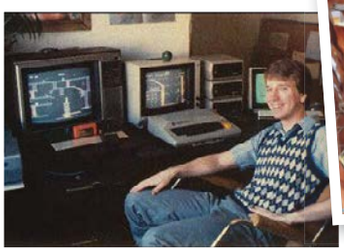
» Jeff Konyu proudly showing off his new Pontiac Trans Am bought with profits from his Big Five games.



> **"I remember those (Atari) chips were called 'GTIA' and 'POKEY'. I even named one of my dogs Pokey"**
> Bill Hogue

popular as its predecessor. "*Miner* way outsold *Bounty Bob*", Bill laments, "and *Miner* was also licensed on practically every computer known to mankind at the time. *Bounty* Bob was only ported to the Commodore 64 (that I can remember) and I did the porting!" This lack of success sadly signalled the end of Big Five as Bill decided to scale down the company "The company ended up right where it started before it died – in my bedroom! At least this time it was in my own house as opposed to my parent's house like when I started the company. I think our $50 cartridges became too much for the economy to bear at the time. Plus the NES was just coming out so people were migrating to that. It was time for me to move past games so I just stopped writing them and looked for a 'real' job instead."

This wouldn't quite be the end of Big Five though as its biggest hit re-emerged for modern audiences, first in 2007 for mobile phones and then again in 2011 for iOS and Windows based systems. Bill explains how this came about, "I licensed *Miner 2049er* to a company called Magmic a number of years back. It originally came to me be about releasing some mobile phone versions of the game in Canada but more recently it did an iPhone version. I suggest you try it! It has a 'classic' mode which is similar to the original Atari version and a version that's been updated with better graphics and sound. I have actually started working on some iOS stuff now myself, so look out for it!" There was no doubting that Bill felt a little sad about the way it all ended, so we asked him what he thinks he could have done differently in hindsight, "I definitely wouldn't have hired so many people during the later years, that is for sure. A big payroll is a company killer!" We couldn't let Bill go without telling us what he thinks Bounty Bob would be up to now if he were still around? "I'm not sure. What year would it supposed to be set in? 2049 maybe? I'm not sure if I'll make it to the year 2049 or later but if I do I'll try to look for him. And I'll see if there are radioactive mutants running around the world that need a good squashing too!"



» Bill Hogue proudly shows off his work on the Atari 800 and Atari 5200 console.

Special thanks to Jeff Konyu and Bill Hogue.

THE DNA OF PROBE SOFTWARE

SOUNDING OFF

■ The humble TRS-80 computer was not known for its audio capabilities. Most developers struggled to get any kind of decent sound from it, but Big Five not only managed to produce arcade-like sound effects but also digitised speech in many of its games for the machine. It also provided tips on how to amplify the sound from their games, such as putting an AM radio near the computer to pick up the interference it generated!

CLONE WARS

■ As well as a number of original games, Big Five Software also recreated some of the best arcade of the Eighties on the TRS-80, albeit in an unofficial form. In fact its first big hit was *Super Nova*, a shameless clone of Atari's *Asteroids*. Other notable tributes include *Galaxy Invasion* (*Galaxian*), *Attack Force* (*Targ*) and *Robot Attack* (*Berzerk*). Then the tables were turned when *Miner 2049er* became the inspiration for Matthew Smith's seminal *Manic Miner*.

AWARD WINNERS

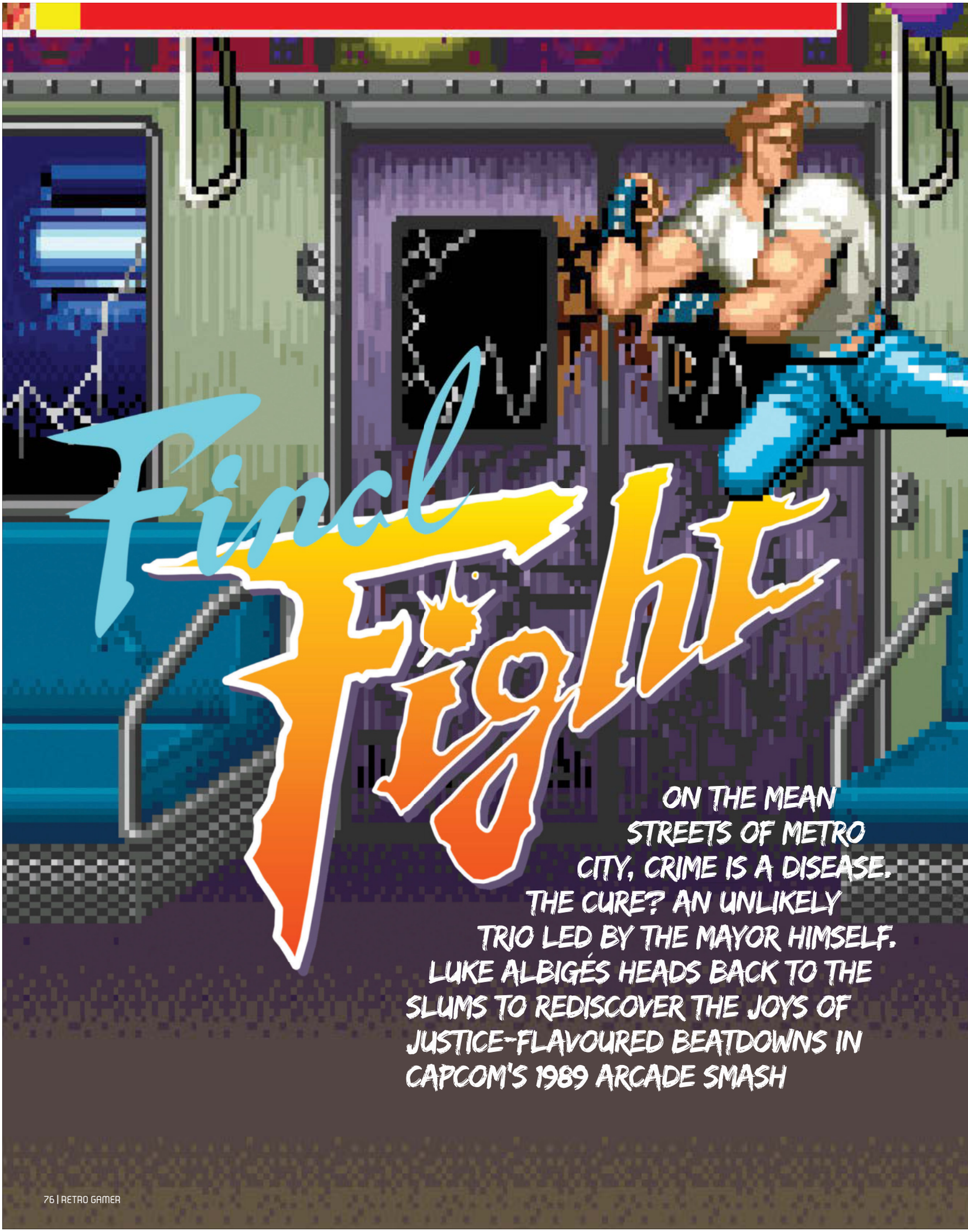
■ Bill Hogue is the first to say he was a perfectionist, and this certainly paid off when you see how well its games were received. Among the many accolades that Big Five won are Electronic Game Of The Year, Creative Computing Outstanding Software Award, Softsel Hot List Best Seller Award, IGN Editor's Choice Award and the success of their games also saw founders Bill and Jeff appear on the US TV show *Good Morning America*.

HARDWARE HEROES

■ If Big Five encountered a problem with anything hardware related then it fixed it! The company created its own disk management system that was far more efficient than the existing one, it coded custom loaders for the TRS-80, designed special cartridges for *Miner 2049*'er that made them harder to copy and even developed a special joystick for use with their games called the Trisstick. Many other companies soon utilised Big Five's discoveries.

MOVIE MOGULS

■ Many of the core team at Big Five were keen artists, photographers and also huge movie fans. So it comes as no surprise to learn that three of them actually moved into the movie industry after the demise of Big Five working behind the scenes for companies such as Technicolor, Touchstone, Panavision and even Walt Disney Studios. Former members of Big Five, notably Curtis Mikolyski and Jeff Zinn, played a part in such productions as *Grey's Anatomy*, *Brooklyn Nine-Nine* and the IMAX 3D movie system.



Final Fight

On the mean streets of Metro City, crime is a disease. The cure? An unlikely trio led by the mayor himself. Luke Albigés heads back to the slums to rediscover the joys of justice-flavoured beatdowns in Capcom's 1989 arcade smash

> "THE SIZE OF THE SPRITES HAD AN IMPACT ON THE FRAME-RATE AND THUS THE PLAYABILITY"
> ALAN BUTCHER

Politicians, as we're sure you've noticed in the recent years, have a nasty habit of writing cheques with their mouths that their asses are incapable of cashing. As such, *Final Fight* is the perfect antidote. When Jessica – daughter of the newly-elected mayor of Metro City and mustachioed man mountain, Mike Haggar – is kidnapped by the Mad Gear gang as leverage against the state officials, Haggar doesn't do the obvious thing and call in a special forces unit, draw up some ludicrous legislation or give a press conference about the city's stance on terrorism. No, he rips off his shirt and takes to the streets himself, ready and more than willing to dispense closed-fisted justice to anyone that is foolish enough to stand between him and his daughter. What a guy.

He's not alone in wanting to ensure Jessica's safe return, either. Her boyfriend, Cody, and the friendly neighbourhood ninja, Guy, are just as quick to rally to the noble (if clichéd) cause, rounding off the trio of playable characters available in Capcom's 1989 scrolling fighter, *Final Fight*. Originally planned as a follow-up to *Street Fighter*, a shift in direction in response to the success of *Double Dragon* saw it move away from one-on-one fighting and evolve into a scrolling fighter. Promotional material exists for the game that even refers to it as *Street Fighter '89*, which shows how late in development the new moniker came – while the *Street Fighter* name better describes the action of *Final Fight* than it does the series that still carries it, the title is believed to have been changed to avoid confusing consumers. Capcom would go on to apply what it learned

from *Final Fight* to creating seminal fighter *Street Fighter II*, so it's likely that distancing *Final Fight* from Ryu and friends was done in preparation for what would already have been in at least the planning stage for most important fighting game ever.

While that was undeniably a smart play on Capcom's part, *Final Fight*'s *Street Fighter* origins have meant that the two series will be forever intertwined. That certainly explains the amount of crossover content between the two franchises, mind – *Street Fighter Alpha* launched with Guy and Sodom as playable characters, later joined by Rolento and Cody in its sequels, while those *Alpha* versions returned to *Final Fight* in the GBA port and later *Final Fight* games feature cameos from the likes of Chun-Li and Guile. Haggar is the only one of the three heroes not to be playable in a *Street Fighter* game, although he has come close – crossover fighter *Marvel Vs. Capcom 3* at least allowed the mayor to throw down against the *Street Fighter* regulars (among others, of course). Ahead of the launch of *Street Fighter V*, in fact, a poll conducted by **Play** magazine asking which legacy characters should return saw enough respondents use the 'Other' option to vote for Haggar for him to beat out ten classic characters in the results. He's arguably too similar in fighting style to Zangief to fit into a mainline *Street Fighter* roster, although given how much *Street Fighter V* has fiddled with classic move pools and characters, it's not beyond the realms of possibility. Haggar *is* pretty darn popular, after all.

Final Fight itself was something of a revelation on release, wowing arcade-goers with its rich, chunky sprites, varied enemies and quick-spinning carousel of interesting settings. But while it was able to draw attention to itself with its slick presentation, it was the tight gameplay that would keep players coming back. Each of the three heroes feels notably different to the others – Haggar is a hard-hitting tank of a man with an arsenal of powerful strikes and brutal throws, Guy is the quickest of the lot and specialises in landing flurries of blows while dancing around enemies and Cody sits somewhere between the two, a balanced blend of power and speed for those not wanting anything too extreme. They're not just unique archetypes, either. Move lists, while rooted in the same core system, change completely depending on who you pick, so you can kick off walls with Guy or carry grabbed opponents into the air with Haggar and return them to ground level with a vicious piledriver. Weapon usage and handling also change with each character – only Cody can wield knives for quick strikes (as opposed to chucking them, as the other two do) while Guy favours swords and Haggar's affinity is for the good ol' steel pipe.

Within these character's movesets, you can see various combo systems which, just as in

[Arcade] The game over screen is delightfully tongue-in-cheek.

Conversion Capers

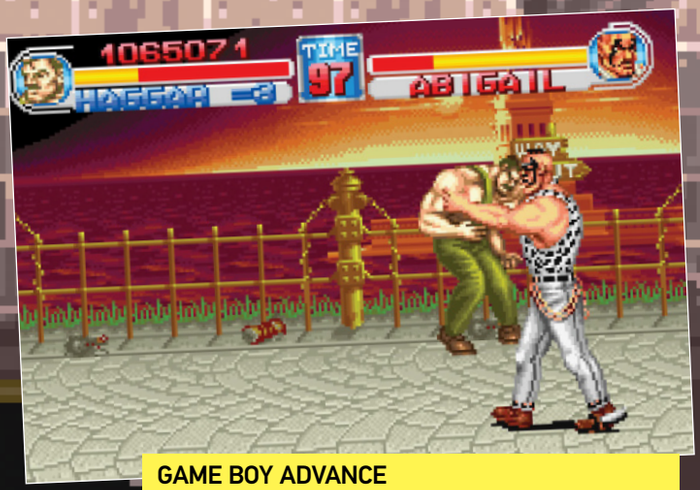
SHARP X68000

■ The fact that this never left Japan is a real shame, as it's hands-down the best conversion of the game that was available at the time. It's so good, in fact, that it's very close to arcade-perfect, certainly closer than any other version – pity it's also the least viable of the bunch to own and play today, although emulated arcade versions on various compilations make up for that.

SUPER NINTENDO

■ Serious issues present themselves right at the start here – Guy isn't playable and the two-player mode is also absent, as is the entire Industrial District. If you can get over that, this is actually a pretty solid port and it does play really well (aside from throwing less enemies at you and Cody feeling a little slow), albeit a port that is quite heavily censored in comparison to the arcade original.

Pixel Perfect



GAME BOY ADVANCE

■ Despite the system's small screen, creating the need for vertical as well as horizontal scrolling in order to keep the sprites large, *Final Fight One* still manages to be both faithful to the original and generally quite excellent. All kinds of unlockables (including *Street Fighter Alpha* versions of Guy and Cody) reward extended play, making this the best and most convenient way to play *Final Fight* on the go.

ATARI ST

■ Effectively a cut-down version of the Amiga port, this was plagued by worse visuals and horribly choppy scrolling which, on top of the already awful attempt to recreate the tight combat of the arcade game, made it hard to recommend even at the time and unsurprisingly, it's even more pointless, ugly and, frankly, embarrassing today.

COMMODORE 64

■ Unlike its peers, this port doesn't even boast the giant sprites that act as a saving grace for otherwise weak versions. Worse yet, this has the knock-on effect of making it much more fiddly to play and between that poor collision detection, it's insanely difficult. Not worth playing, unless you literally have no other way of enjoying *Final Fight*. Even then, probably just don't bother – this is rubbish.

AMSTRAD CPC

■ Porting an advanced game like *Final Fight* to 8-bit home computers was always going to be a challenge and while this is probably the best of the three, it's still barely recognisable. It's chunky and colourful, sure, but like all the other US Gold ports, it plays out like something that was developed by someone who hadn't even *heard* of the original game, let alone played it.

MEGA-CD

■ You know what *Final Fight* was missing? Dire voice acting, that's what! Aside from the newly-voiced opening and ending sequences, this is comfortably one of the better conversions, retaining all key features and gameplay of the coin-op and adding a sweet CD audio soundtrack that is arguably better than the original. It also adds a cool Time Attack mode.

AMIGA

■ Although technically quite impressive, it all starts to fall apart once you look past the nice big sprites. Backgrounds are generally quite poor and the odd muted colour palette throughout is nasty, plus it fundamentally doesn't play like the original. Coder Richard Aplin's lack of love for the game shines through in the clumsy combat. Bizarrely, there's no in-game music, either.

ZX SPECTRUM

■ Stripping back the palette allowed this version to retain the large sprites of the arcade classic, although a lot of the fidelity was lost. It may look crude, but combat still works better than in most of the other US Gold ports, so long as you can put up with the choppy animation and painfully slow pace whenever there's more than a single character on the screen.

Developer Q&A

ALAN BUTCHER EXPLAINS HOW HE SQUEEZED FINAL FINAL ONTO THE SPECTRUM

How did you get the job of converting *Final Fight* to the Spectrum?
Creative Materials was a development house working for US Gold for which I had previously converted a Sega game, *Line Of Fire*, to the Spectrum. This was a first-person, pseudo-3D shoot-'em-up and I was given three days from a standing start to code a demo to show that it could be done. Everything we did was to a very tight schedule.

How were you able to create such gigantic and detailed sprites on the humble Spectrum?
The decision to present the characters in monochrome was a help from a design point of view. The size of the sprites had an impact on the frame-rate of the game and thus the playability. Again with time constraints there was little time to experiment with shifting the compromise.

The original coin-op was a two-player game. Was this ever considered?
I don't think it was. No-one asked me to try it. I was just a code monkey. Decisions like that would be considered by the client.

What was the hardest thing to achieve from a technical point of view?
Working with the Spectrum was always pretty challenging! Quite often, with a coin-op conversion, we would have access to the game board and one of the first jobs would be to put my hardware hat on and extract the graphics from the ROMs. It could take a while to figure out how the sprites were stored. I remember being offered a printout of the assembler code for one of the conversions. I was quite excited, as this meant I didn't have to spend a lot of time playing the entire game to figure out all the moves. Of course it wasn't that easy as all the comments and labels were written in Kanji!

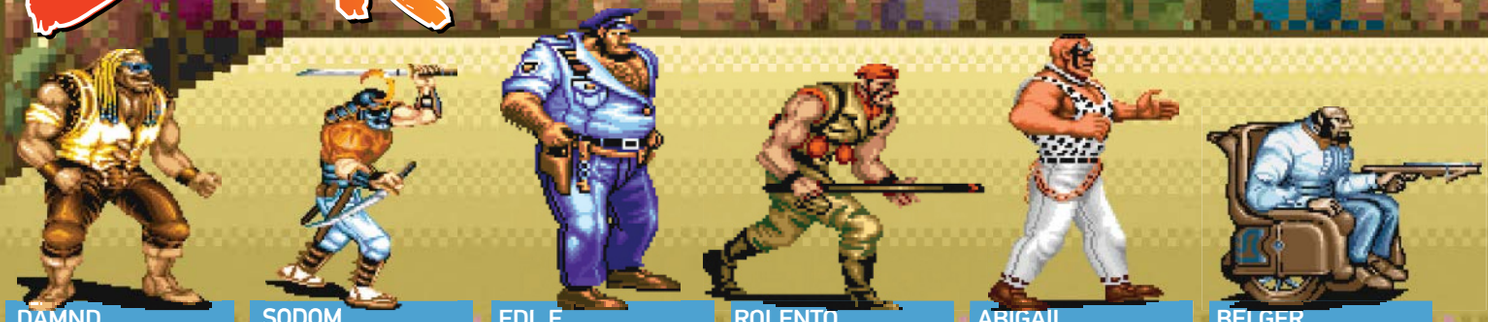
How do you think the conversion holds up today?
That's a hard question to answer. On most projects in those days I was a one-man band. I enjoyed the variety but I would have be more successful if I could have concentrated on coding. We did discuss the trade-off between sprite size and performance, although there may have been conditions in the licence to prevent much change. The appearance would win – reviews were all in print in those days and it would've been different if YouTube had been around!

Street Fighter II later, range from being clearly intentionally programmed to being so complex and abstract that you have to wonder if their inclusion was intentional. Each character's most damaging natural string is to chain together basic attacks, stop short of the final blow to grapple the enemy, slap them around with a couple more clinch strikes before finishing with a throw – that's clearly a design choice, as is the ability to replace the finishing blow of the standard combo with a back throw by pressing away and attack (fun fact: this is the only attack that prevents red Holly Woods from dropping molotovs on death). While the game usually tracks where you are in the standard combo when moving between enemies or delaying attacks, whiffing a punch resets the combo. Easiest to pull off with Cody, this allows for effectively infinite combos on single enemies by landing two or three strike, turning around to throw a punch into thin air quickly then restarting the standard punch combo on your foe while they're still in stun-lock. Multiple enemies can time their attacks to lock *you* in a similar stun loop but, fortunately, Capcom laid on a panic button for players. Hitting both buttons at once performs a wide-range special attack that breaks out of incoming attacks and interrupts more or less everything in the game. This comes at the cost of a little of your life (a nuance the developers of several conversions didn't pick up on) and so must be used sparingly, although it's always worth using if you would stand to take more damage if you don't.

Take Haggar to see the final boss and try out this technique and you'll see a more curious way to push this system in ways we don't imagine Capcom actually planned. With the mayor, his two basic strikes lead into a suplex which is invincible throughout – where Belger can't be thrown in the later stages of the fight, the grapple doesn't connect but the grapple animation and subsequent invulnerability still occur, allowing Haggar to chain strikes relatively safely. Other similar examples exist, such as the ability to manipulate the game's AI routines via proper placement, and whether or not Capcom intended for these techniques to exist, they certainly add an extra level of depth and flavour to a combat system that often unfairly comes under fire for being 'just mash the attack button and win the game'.

There's not much of an argument to be made for *Final Fight* being much of an innovator, with *Kung Fu Master* and *Double Dragon* (among others) having laid the rock-solid foundations on which Capcom's game built. Even in terms of selectable characters, the game was beaten to the punch by a few months by *Golden Axe*, although there is one thing Capcom can stake a claim for inventing with the game – the amusing ongoing videogame trope of recovering health by eating questionable food found in the bin. If it weren't for *Final Fight*, we may never have heard the *Tekken* announcer growl, "CHICKEN!" in Tekken Force mode, which isn't a notion we want to entertain. Then again, without *Final Fight*,

Boss Rush



DAMND
■ This fool may be stacked but he's also the first boss, meaning he's not especially challenging. In fact, he spends half the fight sitting down, leaping to safety then calling in his goons to do his dirty work. He typically does this twice throughout the fight, but if you are using Haggar, you can sometimes do enough damage to him before his first escape to skip the second phase entirely and finish the fight early.

SODOM
■ With twin swords and an annoying moveset, Sodom (or Katana in the censored versions) is the first serious threat you face. His blade dash destroys your health bar, but it's far weaker when he's unarmed – landing a good combo can actually rob him of both blades and greatly weaken his attacks, plus you can use them against him. Grab one each in two-player and he won't be able to get them back if you play safe.

EDI. E
■ If you thought Sodom using swords was a bit rude, you will hate this bent cop – he brings a gun and a nightstick to a fistfight. He'll generally swing the baton about after getting up, so keep your distance after knocking him down. When he starts shooting, Guy and Cody can easily dodge bullets until he chills out then commence the beatdown, but Haggar really needs to stay on top of him and work him over with throws.

ROLENTO
■ Explosives, you say? This is just getting silly. Fortunately, Rolento's grenades are pretty easy to avoid – it's his unpredictable and speedy stick attacks you need to watch out for. Clear out the other enemies as fast as possible as dealing with them while the boss is out makes it easy to eat a few cheap shots from him, and just don't get greedy. Nip in, steal a few hits (grab him, if you can catch him) and whittle him down carefully.

ABIGAIL
■ Tired of losing most of your life to Andore's throws? Then you'll be delighted to hear that this guy has *even more powerful grapples*. Aside from his charge (which is easily spotted and countered with early jump kicks), his range game sucks, which you can abuse by smacking him around with the weapons conveniently laid on just before the fight. His health pool is *insane*, but keep the fight at mid-to-long range and you should be okay.

BELGER
■ The head of the Mad Gear gang is... well, he's not what we were expecting, put it that way. Grapple him out of his wheelchair to set Jessica free, then get ready for a drawn-out showdown. Belger leaps around firing off volleys of crossbow bolts – dodge or deflect these while closing in on him, then try and land a throw as he likes to jump away as soon as you start punching. Keep it up and you'll get to boot him out of the window!

there may never have even *been* a Tekken Force mode in the first place so, you know… swings and roundabouts and all that.

And try as they might, Capcom could never truly capture the magic of the original *Final Fight*. The two direct SNES-only sequels always felt like they were playing catch-up with other games in the field, the first adding next to nothing to the formula (although it did give SNES owners the gift of a co-operative mode in *Final Fight* for the first time) and the second bringing in a bunch of elements already seen in other similar games, such as the rear grapple from *Streets Of Rage* and the ability to dash as in *Golden Axe*. The franchise was not allowed to grow old gracefully either, shoved into blocky 3D for one-on-one fighter *Final Fight Revenge* (which wasn't very good) and later butchered for 2006's *Final Fight: Streetwise* (which *really* wasn't very good). Capcom did manage to pull the franchise back from the brink with its most recent release, though – *Final Fight: Double Impact*, an arcade-perfect port of the original presented beautifully via all kinds of simulated cab and filter options (and given online multiplayer, and bundled with *Magic Sword* – a side-scrolling fantasy game), is the best way to play the game today. The fact that the first game stands up better today than anything else Capcom has tried with the series is telling of *Final Fight*'s quality. Yes, Mr. Haggar, you can count on our vote.

Special thanks to Kieren Hawken and Martyn Carroll for the extra interviews. ★

The Final Word

RICHARD APLIN ON SINGLE-HANDEDLY BRINGING THE GAME TO AMIGA

How did you come to land the job of converting *Final Fight*?
It just came my way. I think I was reasonably well regarded as a geek within Binary Design at that point, and they got the gig from US Gold. People tend to romanticise the Eighties and Nineties games industry nowadays, but it was very pragmatic when you worked on the inside.

Without wanting to burst any nostalgic balloons – things were all business; an arcade licence went to the highest bidder. That bidder paid the most because they expected to recoup more money based on brand recognition when the kids looked at what was on the shelf. The licensor picked the developer they were most confident would get it done in time for Christmas and (secondarily) for the most reasonable cost. As far as I know, nobody in the chain particularly cared about the quality of the end result except the individual programmer, who was under a savage time constraint – and in the case of 16-bit conversions they usually had to do Amiga and ST at the same time because it was considered a practical cost-cutting strategy by the management. Did Stock Aitkin & Waterman think Kylie's *Locomotion* was a timeless classic, or something that would shift a lot of units? If you got a good arcade conversion in those days you mostly have the personal pride of the programmers to thank. I was as proud of my work as anyone, although I'd say I focussed more on the technical aspects, rather than the gameplay.

Were you a fan of the original arcade version of *Final Fight*?
Well… not especially. I played it again recently on MAME and still didn't think it was anything really special as a game – I know a lot of people loved it but I just don't see anything that particularly stands out. To me it's just walk, kick, punch, walk, repeat – give me *Street Fighter* any day. If that's sacrilege to some people, sorry.

Did you get any of the source code to the game or did you just have to try and copy the game from playing it?
Nope, I ripped the code and gfx roms and figured everything out myself. I wish I'd had the original source, in which case I'd have *very* gladly used the original gameplay code and perhaps people would've been happier with the end result. Given the tools of the day, I had half a meg of 68k binary code from the roms and no emulators; disassembling and rebuilding it all so it ran on an Amiga (with half a meg total of RAM) was looking dangerously impractical; a huge rabbit-hole to go down with no guarantee of success. Trust me when I say that I would have *much* rather used the original gameplay code if I could.

> "I JUST DON'T SEE ANYTHING THAT PARTICULARLY STANDS OUT"
> RICHARD ALPIN

What were the biggest challenges converting a game like that to the Amiga and Atari ST?
Converting the graphics was challenging but I was very happy to put the time in rather than have hand-redrawn (and much smaller) sprites. I'd have liked to have used the original backgrounds but it wasn't practical.

Okay, final question: Commodore Amiga vs. Atari ST was a hot topic back in the day, which machine did you prefer to work with and why? What version was developed first?
Oh god, the Amiga was a *far* superior machine. There's just no question, even for the most ardent fanboy. On all my 16-bit games, I did the Amiga version first then hacked it around to run on ST – doing things in that order that made my life harder but was totally worth it. The ST was the poor cousin in every way. Many people in the industry did the ST version first and ported to the Amiga; much easier, but you could tell with the end result.

PlayStation

» **MANUFACTURER:** Sony » **YEAR:** 1994 » **COST:** £299 (launch), £10+ (today)

They say that practice makes perfect, but sometimes you just get things right at the first attempt – and that's exactly what Sony did with the original PlayStation. Where previous 32-bit consoles had failed to wrest control from of the console market from Sega and Nintendo, Sony's machine was competitive in every regard. It was cheaper than Sega's Saturn, as well as easier to develop 3D games for. It was out sooner than the Nintendo 64, and its CD releases were cheaper than ROM cartridges. Plus, it had high-quality games which drew players in, from Namco arcade conversions to original properties like *WipEout* and *Twisted Metal*. Over time, cinematic experiences like *Resident Evil*, *Final Fantasy VII* and *Metal Gear Solid* would permanently transform players' expectations of videogames.

Early PlayStation units were plagued with disc reading problems. The laser assembly in the CD-ROM drive was prone to becoming misaligned, due to plastic damage caused by mechanical wear and overheating. Tales of users turning the machine upside down to remedy the issue were common. Other problems included disintegrating disc spindles. Over time, the console's design was revised to fix these errors and remove unused connection ports, and in 2000 the whole machine was miniaturised as the PSone.

ESSENTIAL GAME

Ridge Racer

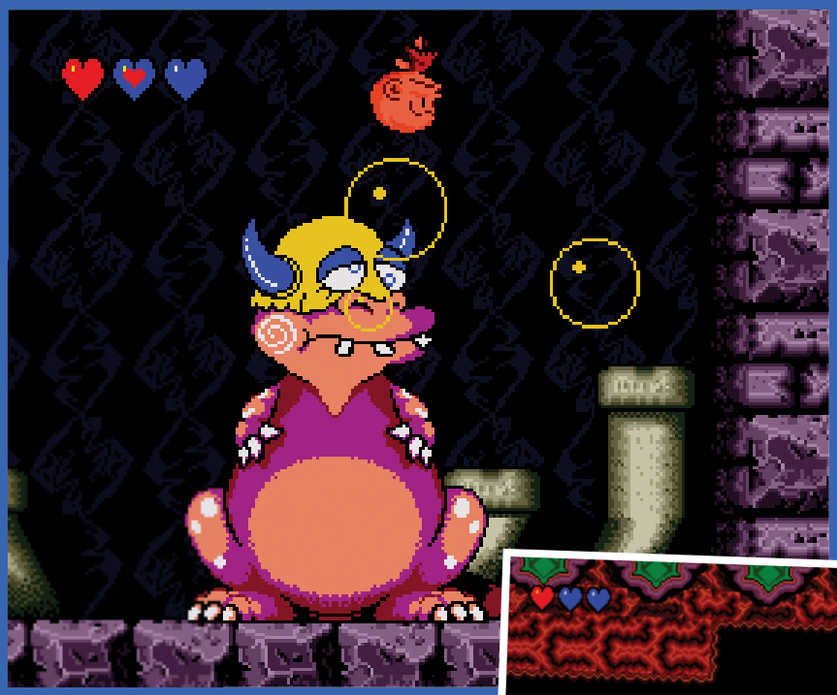
Think back to a time before you generated all of your amazing PlayStation memories, and try to recall the reason you wanted one in the first place – there's a good chance you'll think of *Ridge Racer*. Here was a state-of-the-art coin-op racing game that cost thousands of pounds, squeezed and prodded to fit a machine that was much smaller and more affordable, and thus less likely to anger your partner when it turned up in the living room. Namco's conversion is a loud, colourful thrill ride that typifies the Nineties gaming environment the PlayStation was born into.

PlayStation fact

■ The PlayStation was the first ever games console to ship 100 million units, and remains the third-highest selling platform ever after the PlayStation 2 and Nintendo DS.

RAM: 2MB MAIN, 1MB VIDEO, 512KB AUDIO
PROCESSOR: MIPS R3000A-COMPATIBLE 32-BIT CPU (33.8688 MHZ)
AUDIO: 16-BIT SONY SPU (24 CHANNEL ADPCM/MIDI)
OPERATING SYSTEM: 512KB PLAYSTATION BIOS ROM
MEDIA: CD-ROM (650MB CAPACITY, 2X SPEED)
GRAPHICS: GEOMETRY TRANSFORMATION ENGINE (180,000 TEXTURED POLYGONS PER SECOND)

BONK
MARIO STOMPED ON ENEMIES AND ALEX KIDD USED HIS FISTS, BUT BONK IS A HERO WHO REALLY USED HIS HEAD. JOIN NICK THORPE FOR AN ARCHAEOLOGICAL DIG...



» [PC Engine] The bosses of *Bonk's Adventure* were huge and nicely animated, and hold up well against later games in the series.

» [PC Engine] Bonk can climb some walls by latching on with his teeth and gnashing away.

The early history of mankind is something we're still trying to work out. Humans existed for a long time before we managed to get the hang of reading and writing, so much of our past is unrecorded and thus shrouded in mystery. However, we all have a stereotypical image of our cave-dwelling ancestors – loosely clad in animal fur, relying purely on brute strength to survive.

Luckily, the origins of the prehistoric platform game hero Bonk are a good deal clearer, although they might be surprising to those of you who aren't already in the know. You see, he originally arrived as part of a comic strip in the pages of *Gekkan PC Engine*, a monthly Japanese magazine devoted to NEC's popular console. In fact, his Japanese name was a pun on that of the system – PC Genjin (primitive man). The character, designed by Kobuta Aoki of Red Company, quickly became popular with readers and as he'd taken over the spot previously used for comics promoting forthcoming games, there was a little bit of confusion over whether our large-headed hero would actually be coming to the console. Hudson Soft and Red Entertainment soon decided to put paid to the confusion by getting a game out, and Atlus was brought in to help with development.

If you're wondering why an additional company was roped into producing the game, the reason is simple: *PC Genjin*, or *Bonk's Adventure* as it would come to be known in the West, was developed on an extremely tight schedule. The teams had just three months to pull together a platform adventure to serve as the new PC Engine mascot's introduction to the gaming world.

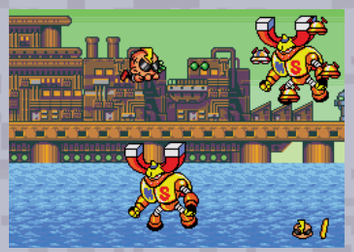
In his debut game, Bonk's job was to rescue Princess Za from the big baddie King Drool, and he'd achieve this by battling his way through all manner of prehistoric creatures including dinosaurs, winged frogs and even overgrown slugs. Better yet, just as his name implies, Bonk would defeat them with a wallop from his mighty cranium. However you wanted to achieve your goals, Bonk's head was the key – you could stand in front of an enemy and deliver a headbutt, or jump over them and dive down head-first. If you needed to climb a tall wall, Bonk would even grip it with his teeth! If you fed him meat, he'd become invincible, charging around stages madly. The prehistoric world proved to be a rich source of platform environments, too – volcanic islands, ice worlds and primitive villages all featured.

ZONKED OUT

Bonk's futuristic alter-ego, Zonk, has a couple of his own games – take a look at both of them...

While *Bonk*'s RPG spin-off series never made it off the ground, the shoot-'em-up take on our prehistoric hero soared into the skies. *Air Zonk* was a futuristic take on our man, and the first game arrived in 1992. Zonk can team up with partner characters, powering up by collecting smiley faces. "As a long time player of *Coryoon* (which had some of the same developers), *PC Denjin* was just a huge bundle of crazy fun," says Paul. "You can see the vibrant imagination of the designers clearly at work here and they really went all-out on this, making it one the machine's greatest horizontal shoot-'em-ups." The positive reception to the game and Zonk's new and updated design saw Turbo Technologies Inc. adopt him as its new mascot for the later years of the Turbografx's life.

A sequel was a dead cert after the positive reception for *Air Zonk*, and a Super CD-ROM sequel titled *Super Air Zonk* arrived in 1993. However, it was rather less well received due to its lack of difficulty and weaker design work. "I enjoyed it, although it was a bit of a disappointment in some areas (particularly the lack of technically clever parallax that we'd come to expect from Hudson at this point)," notes Paul. "The first couple of levels were fun and had great music, but as you progress it evidently gets less interesting." *Super Air Zonk* would mark the end of the spin-off series, but both games have resurfaced on the Wii's Virtual Console, if you want to take a look.



» [PC Engine] *Air Zonk*'s got a heavy electricity theme, from the bolt on his own head to his magnetic enemies.

» [PC Engine] A fishing Chikkun is about to receive a particularly violent surprise from the hungry Bonk.

» [PC Engine] By mashing the jump button repeatedly, Bonk can climb directly upwards through waterfalls!

» [PC Engine] If Bonk is squashed, he will briefly take on this special crab form.

Luckily, they delivered. Paul Weller, the man behind the PC Engine Software Bible (pcengine.co.uk), remembers his first encounter with the hero well. "There used to be a local games shop that I visited regularly and the staff loved to show off the latest games," he recalls. "I'd briefly seen its PC Engine unit running *Gunhed*, which looked nice but I wasn't into shoot-'em-ups back then, and one day when I went in there they had *PC Genjin* running. It looked pretty cool – the sprites and animation were so cartoon-like – and I managed to get a quick play. I loved it to bits, and from then on it was my quest to obtain a PC Engine."

» [PC Engine] The huge Bonk looked really impressive for the time, but it didn't add too much to the gameplay.

Having a mascot character was something of a game-changer for NEC's console. "I think it was very important," says Paul. "Back then, Nintendo had Mario and Sega had… well, it was still pushing Alex Kidd because Sonic hadn't arrived yet. But having an identifiable icon that represents one of your best games was important to give the machine an identity." *PC Genjin* did just that – arriving at the tail end of 1989 in Japan, it quickly became a hit thanks to its strong gameplay and great sense of humour. In North America, Bonk's arrival in 1990 was a welcome shot in the arm for the system's fortunes. *Bonk's Adventure* was its bestselling game, and soon became a pack-in title. It made an impression on the UK import scene too, with the *Computer & Video Games Complete Guide To Consoles* awarding it 95% and calling it "the best PC Engine platform game going."

As a result of this popularity the violent little guy later found himself appearing on other platforms under different names. For example, European fans might be most familiar with his very well-received 1992 turn as *BC Kid* on the Amiga. "I thought they actually did a pretty good job of the conversion and it was nice to see the updated sprite used in this iteration of the game," Paul notes. *FC Genjin* was the name of his 1993 outing on the Famicom, which was a pretty faithful and rather nice-looking rendition of the original which featured a cut-down selection of levels. It later made it to the US as *Bonk's Adventure*, and is an expensive rarity.

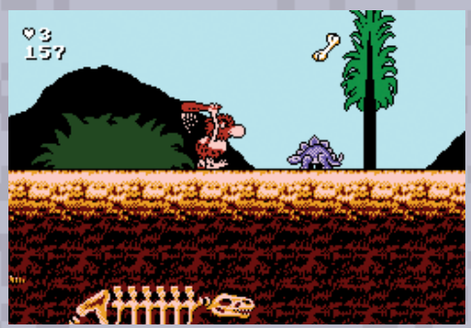
CAVE STORY

If your platform game didn't star furry animals in the 16-bit era, chances are it starred a caveman. Here are five of Bonk's contemporaries…

PREHISTORIK

TITUS INTERACTIVE

■ This is everything you imagine a caveman-based platformer could be, with heavy clubbing and lots of dinosaurs. Not only did *Prehistorik* receive a sequel, it actually survived the extinction of the 16-bit platform game, as both the original game and a full remake are both available on iOS now.



BIG NOSE THE CAVEMAN

CODEMASTERS

■ This hungry hero wields a mean stone-slinging club, which he can use to smash up dinosaurs on the NES, Atari ST and Amiga – but be warned, it's a tough challenge. A Master System and Game Gear version was planned under the title *Dinobasher*, but was shelved following poor reviews of the original.

CHUCK ROCK

CORE DESIGN

■ Before Lara Croft came along, old Chuck was the face of Core Design. There was a slight puzzle flavour to his particular brand of platforming, as progress often required knowledge of where to throw the rocks that littered each stage. A sequel starring Chuck's kid and a kart racing spin-off followed.

"I think the biggest element that Bonk's Revenge brought was the high degree of polish"

Paul Weller

Before all of that though, there was the matter of a follow-up on the NEC hardware that is his ideal home. After a scrapped attempt to make an RPG (cleverly titled *RPC Genjin*), Bonk was given a platform sequel titled *Bonk's Revenge*. King Drool III decided to up the ante for the sequel, and having left the business of princess abduction to his grandfather he promptly stole half the moon instead. That's a big league move, and worse yet he was intent on building a kingdom of monsters, with the shell-headed Chikkun creatures as his minions. Fortunately, Bonk was back on the case and he'd learned some new tricks – the triangle jump allows him to scale narrow gaps between walls, and he can also climb trees.

"I think the biggest element that *Bonk's Revenge* brought was the high degree of polish," notes Paul. "The original looked rushed with its simpler backgrounds. *Bonk's Revenge* refined the character sprite, cleaned everything up and you could tell a lot of love and effort went into making it. There were some gameplay tweaks; aiming your headbutts requires more skill, and the programmers took away your ability to 'fly' though the levels by rapid-fire headbutting which was a little cheat I quite enjoyed!"

Bonk's Revenge was considered an exceptionally well-crafted platform game upon its debut in 1991, and is still a fan favourite today. *Mean Machines* awarded the game 92%, with reviewer Paul Rand commenting that it was "not only a darn sight larger than the original, but infinitely more enjoyable in the playability stakes." The game was very popular with the PC Engine and Turbografx crowd once again. However, the Turbografx-16 was struggling to establish itself on the market in North America, and the game failed to draw the attention of Western players away from the likes of *Super Mario World* and *Sonic The Hedgehog*.

The conclusion of the PC Engine *Bonk* trilogy followed in 1993, going by the name *Bonk 3: Bonk's Big Adventure*. The name was quite literal, as Bonk could transform into an enormous screen-filling, fire-breathing version of himself by eating sweets. He could also eat sweets to shrink himself into a miniaturised form, allowing him to access new areas. Once again, King Drool is terrorising the Dinosaur Kingdom, but this time the adventure visits some surprisingly modern locales, including cities and warehouses. However, the biggest new addition was a two-player co-op mode – a big deal, particularly on a system with a limited multiplayer library.

[Arcade] Standard elements of the PC Engine games returned in Kaneko's arcade game, including spring flowers.

Critical reception was largely positive, but not quite up to the level of praise that previous games received. *Electronic Gaming Monthly*'s four reviewers awarded the game an average mark of 7.75/10, stating, "The shrinking and growing Bonk modes are purely novelties […] If you ignore that and play alone, you won't find many new features to mess with. *Bonk 3* must

JOE & MAC

DATA EAST

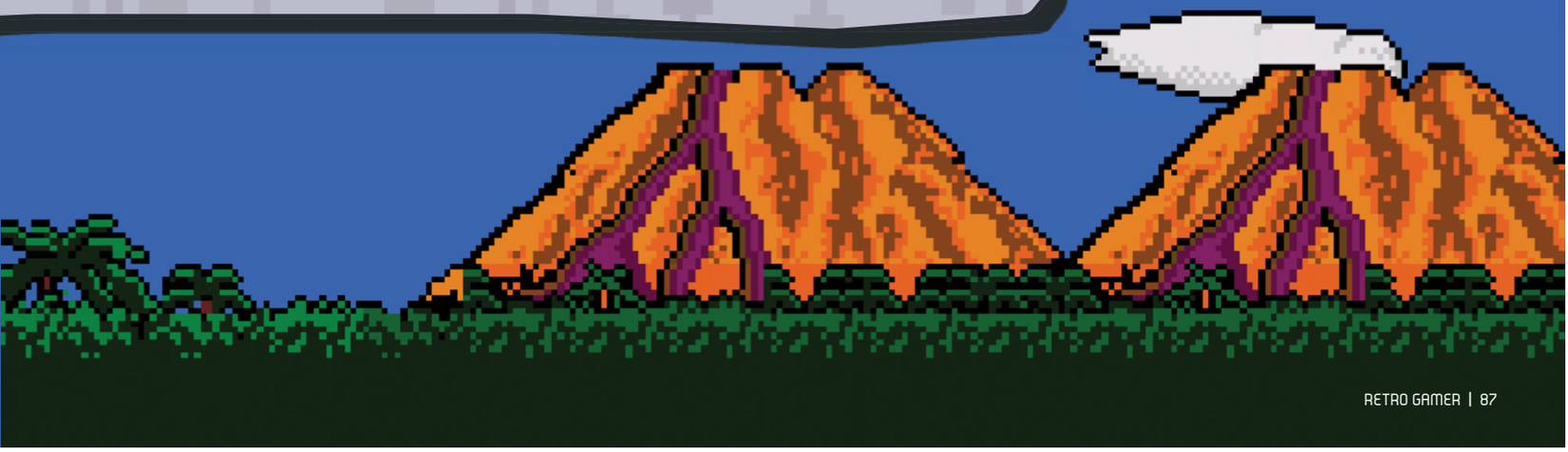
■ This arcade game was more of a run-and-gun affair, similar to *Shinobi*, than regular platform game, but it still became popular all the same. The boomerang-chucking heroes soon made their way to a variety of different home formats, and the game gained a couple of sequels as well.

THE FLINTSTONES

TAITO

■ With a film on the way and a general resurgence in popularity, *The Flintstones* was a hot property in the early Nineties and Taito snapped it up. The result was a competent but unspectacular Mega Drive platform game in which Fred Flintstone runs around smacking his enemies with a club.

[Arcade] Smiley faces attach to Bonk's head in the arcade game, giving him a huge attacking range.



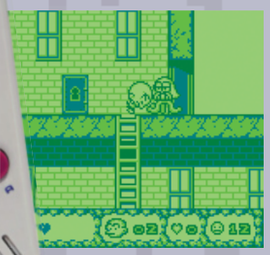
POCKET PC

Bonk's handheld adventures are interesting in their own right…

Bonk also made a few appearances on the Game Boy during the Nineties, and his presence was appreciated by players worldwide – the Game Boy games were amongst the few *Bonk* titles to release in every region. The first game, *Bonk's Adventure* (or *BC Kid* over here) was something of an amalgamation of the first two PC Engine games, with familiar level designs and the enemies and mechanics that will be familiar to any fan. It's a good platformer, but suffers a little from being somewhat sparse – there are too few enemies around, much like the NES version of the original game. If you've played the PC Engine games, it's a novelty but not too much more than that.

The sequel, titled *Bonk's Revenge* (or *BC Kid 2),* isn't a conversion of the PC Engine game, but instead a whole new game in its own right, with brand-new level layouts. It also boasts some unique meat transformations, including a thief transformation that allows you to pass through otherwise locked doors, a superhero and even a pumpkin-headed Bonk. It features the same general game mechanics as the home console games, but with a wealth of original content it's easily the most essential of the handheld games for fans.

A third and final game in the series, titled *GB Genjin Land: Viva! Chikkun Kingdom,* was released later on, which wasn't a platformer. Instead, it was a Japan-only collection of mini-games. This was later compiled alongside the previous Game Boy platform games in a collection pack, titled *Genjin Collection.*



be played with a friend to really have fun." It's an assessment that Paul largely concurs with. "*Bonk 3* was impressive in some areas, particularly the huge sprites and the interesting addition of a fairly fun two-player mode but I think it suffers a little by being too familiar, despite the new gimmicks," he says. "The level design isn't quite as refined as it should be and while the super-sized Bonk is visually very cool, it ends up not being practical for much of the time. It's not quite the step forward that the second game was from the original."

The PC Engine was looking a little long in the tooth by the time *Bonk 3* arrived, so it was produced in relatively limited quantities. The Japanese HuCard release is a bit more expensive than its predecessors, but still reasonably priced. In North America, however, it was the final game for the Turbografx and was released in both HuCard and Super CD-ROM formats; the two versions are very similar, with the CD version getting some additional mini-games and an upgraded soundtrack. Both of these versions regularly sell for hundreds of pounds.

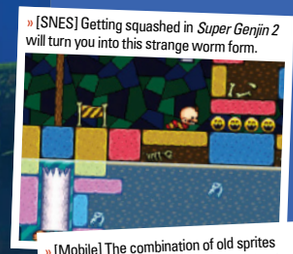
Having gone as far as he could on the PC Engine, Bonk's adventures continued on other formats. Kaneko brought him into the arcade for the first time with *Bonk's Adventure Arcade* (aka *BC Kid*), a score-attack game formed around a selection of short levels. Unlike the previous game, which had offered co-operative multiplayer, the arcade game was decidedly competitive in nature. There's a greater emphasis on enemies, and after every few stages you can engage in a boss battle.

It's a visually excellent game, but it did make some design changes that mean that it won't be to everyone's tastes. Fans of Bonk's meat-induced rages will lament the fact that there aren't any power-ups at all. Smiley faces can still be collected, but these are mostly used as shielding. However, you can find items laying around that will increase your score, like a basketball you can dribble around. It's a slightly odd entry in the series as a result, but it is a cool platformer in its own right.

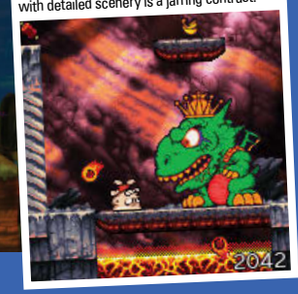
» [SNES] Odd transformations abound – this chicken thing is a form down from the gigantic lizard Bonk.

"Bonk will always be linked to the PC Engine and TurboGrafx-16 consoles"
Paul Weller

» [Xbox 360] *Bonk: Brink Of Extinction* was looking quite good before it was canned by Konami.



» [SNES] Getting squashed in *Super Genjin 2* will turn you into this strange worm form.



» [Mobile] The combination of old sprites with detailed scenery is a jarring contrast.

After that, Hudson Soft and Red brought our favourite caveman over to the Super Nintendo. Known as *Super Bonk* (or *Super BC Kid* on this side of the Atlantic), the game retained the shrinking/growing mechanics of *Bonk 3* and ramped up the shift to more modern-looking worlds. This time around, Bonk could carry spring flowers around on his head, and branching levels allow for a greater level of exploration than in the PC Engine games. There were new features too – for example, eating meat as giant Bonk allowed you to transform into a Godzilla-style agent of destruction, capable of tearing through buildings that stand in your path.

Additionally, moving over to the SNES brought some key advantages. While it wasn't quite as colourful as the PC Engine games, *Super Bonk*'s sprites were more detailed due to the system's improved colour handling capability, and the game managed to make use of the Mode 7 technology in places. It was a bit of a divisive game, though – some players consider it to be one of the best in the series, but others aren't convinced and cite the size-shifting gimmick and level design as flaws.

The Japan-only *Chou Genjin 2* (or *Super Bonk 2*, for the sake of clarity) addressed many of these concerns. The visuals were as bright and cartoony as anything else seen on the SNES, and the stage designs incorporate slightly more surreal, stylised environments like those in *Super Mario World*. What's more, the level layouts are much closer to the first two games, which is a welcome change for those who prefer the early entries in the series. Better yet, Bonk has a variety of new powered-up forms to play with, including the agile Ballerina Bonk who can double jump, Drill Bonk who can bore into the ground, and even a weird tank form capable of demolishing buildings.

» [SNES] You can often hitch a handy lift on a friendly dinosaur throughout the series.

Difficulty was adjusted a bit for the game, too. Bonk no longer continued from where he left off when he died, and instead had to restart the level – however, this increase in difficulty was offset by the introduction of a password save system. Thankfully, *Super Bonk 2* is a common game because it's one of the best in the series – the sense of humour and personality the series is known for is on fine display here, and the shift away from the size gimmick really helps the game shine.

Sadly, that return to form would prove not to matter too much. Hudson's next entry in the series was to head to the Nintendo 64, named *Ultra Genjin* after the console's early name, and would have been the first *Bonk* game to take place in full 3D. However, Hudson changed direction early in development and the work that had gone into *Ultra Genjin* ended up repurposed into the relatively mediocre platformer *Bomberman Hero*. Bonk would then disappear from the limelight for a number of years, showing up primarily in cameo appearances until a Japan-only remake of *Bonk's Adventure* appeared on the GameCube and PS2 as part of the *Hudson Selection* series.

It wouldn't be until 2006 that our prehistoric pal would finally star in a new game, the aptly-named *Bonk's Return* for mobile phones. This time, King Drool has taken to kidnapping Bonk's favourite women, which is something he just won't stand for. Much as with previous *Bonk* titles, our little guy gets to run around and headbutt baddies, chomp meat and generally cause chaos. Developer Two Tribes delivered a nice-looking game and one which was moderately well received at the time, with its time-tested gameplay let down slightly by repetitive level designs. As a pre-smartphone mobile game, it accommodates for keypad controls with slower and stiffer movements than on the consoles.

Since then, we haven't had a new *Bonk* adventure. The closest we came was with the planned 2011 release *Bonk: Brink Of Extinction* for Xbox 360, PS3 and Wii, which was being developed by Pi Studios in Texas. The download-only title featured 3D visuals with a classic 2D gameplay style, and was very similar in style and tone to the earlier *Bonk* games, with Bonk attempting to stop an imminent meteor strike. The game was close to completion but was cancelled in March 2011 by Konami, which had acquired Hudson Soft in full two months prior, and Pi Studios was shuttered as a result. In some ways, the game was a victim of timing – it was close enough to release that it might have been given a reprieve, but the earthquake in the Tohoku region of Japan ultimately made the natural disaster theme too sensitive. While builds are known to still exist, none have been leaked to the public.

Still, Bonk lives on – his PC Engine platformers can be picked up on download services, including the Wii Virtual Console and some regions of the PlayStation Store for PS3/PSP. What's more, he'll always have a special place in the hearts of those who chose to avoid the Nintendo and Sega camps in the 16-bit console war. "Whatever format it comes out on, Bonk will always be linked to the PC Engine and TurboGrafx-16," says Paul. "He's just awesome; Mario and Sonic are way too nice, but mess with Bonk and you'll get a Glasgow kiss."

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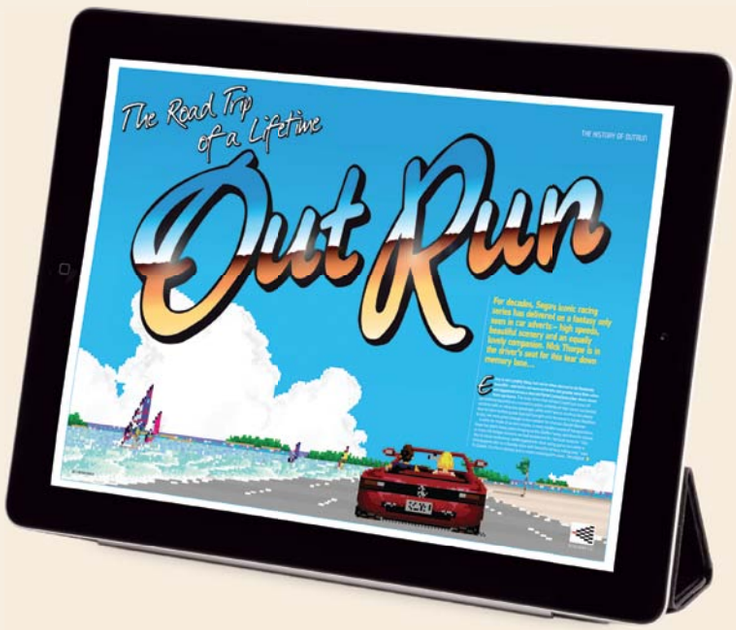

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ASHLEY ROUTLEDGE AND DAVE SAUNDERS

Starting out on the Commodore 64, Ashley Routledge and Dave Saunders pooled their talents to produce many fine games and demos. Paul Drury has a rabbit with Ash and Dave

If you owned a C64 back in the day, you may have first come across the work of Ash and Dave through the many demos they produced and distributed. The technical wizardry and creative ambition shown in such demos as *Snowball Sunday* and *Electric Café* was also seen in a back catalogue that combines impressive conversions, such as Gaplus for the C64 and *Micro Machines* for the Game Gear, with plenty of original titles such as *Slicks* and the recently recovered *Daffy Duck*. We met up with the boys in the Saxon Mill pub by the river Avon in Leamington Spa, near to Warwick where they both live, for a chat about their long careers. And you'll be reassured to know Dave still had his original C64 User Manual in his car boot…

» [C64] *Pirates In Hyperspace* was Ash and Dave's first published game, released when they were just 17.

Most bedroom coders back in the Eighties worked on their own but you got together and made games as 'Ash and Dave'. What were the advantages of being a team?

Ashley Routledge: It meant we could do it all… and without getting too lonely! There were some programmers that could do everything, but it was rare.

Dave Saunders: We met at Ratton Secondary school in Eastbourne so we had that friendship before we learned to program. I joined the school in the second year in 1982 when I moved from Dorset and they plonked me down next to someone in the class. It was Ash and he's been lumbered with me ever since.

AR: With Eastbourne being a seaside town, we had a pier and we lived in the arcades. All our pocket money went into the arcade machines.

DS: Do you remember the arcade that used to open up early on Saturday and have all the games on freeplay for a few hours? [They both start reminiscing about *Tron* and *Track and Field*].

When did you start trying to write games yourself?

AR: It wasn't until the fifth year at school when we got our C64s. We both worked at Wimpy to afford them. We were massively in to that *Zzap!64* scene. Our heroes were Julian Rignall, Gary Penn, Gary Liddon…

DS: They were our gods! We'd take the C64 into school and play music by people like Rob Hubbard and Martin Galway and say, 'Your BBC Micro can't do that, can it?' We had to go and see the career advisors in the last year of school and we told them we wanted to make games.

AR: They looked at us like we'd said we wanted to be rock stars. They pushed us into a course studying Cobol and doing business programming at Lewis College near Eastbourne. We went for the first day and then just said, 'Nah, we want to make games!' Our parents were not happy.

We hope they felt better when you had *Pirates in Hyperspace* after you left school.

AR: *Pirates* was originally called *FX*. We were 17 and thought we were the coolest thing ever. They made us change it and we hated the new name.

DS: We started writing that [game] the day we left the college course. We sent it around to anyone we could think of – Mastertronic and all the other budget labels. We got £500 from Alternative Software for it with no royalties. It was our first game and we knew we could do better.

You followed it up with *Alloyrun* but sadly it was never officially released. What happened?

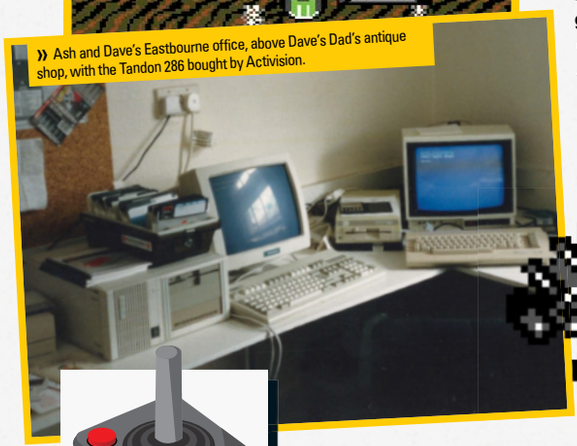
DS: This was our first 'proper' game. We'd spent quite a few months on it and had touted it around. Starlight, which were part of Ariolasoft, were keen, and we did a deal for £5,000. That was the point we thought, 'Yeah, we can do this as a job!' We got an advance but it got into financial trouble and once we handed over the final game, we never got any more money. We tried to pursue them in the small claims court but they put in a counter claim against us for £10,000!

AR: That was because we'd made a demo, I think with Maniacs Of Noise, and released it on Compunet.

> We grew up in a seaside town and we lived in the arcades. All our pocket money went into the machines Ashley Routledge

» [C64] *Johnny Quest* had some great visuals that easily captured the spirit of the original cartoon series.

» [Game Gear] The boys are especially proud of their Game Gear port of *Micro Machines*.


» Ash and Dave's Eastbourne office, above Dave's Dad's antique shop, with the Tandon 286 bought by Activision.

It was just a drum track but they made out we'd released part of the game and were in breach of contract.

Cheeky blighters. You were involved with the demo scene, though. It seems a lot of effort for no financial reward. Are you just big show offs?
DS: Yeah, that's all it was! It was the fame! You'd look in *Zzap!* and see these names like Mean Team, Stoat and Tim, Ian and Mick, loads of people on Compunet…
AR: It was a way to express yourself, like an artist. Plus it was a way of sharing all these little tricks, like switching borders off and getting more than eight sprites on the screen. We loved thinking of something no one had done before and trying to make it work… and then showing it off! It was like a competition. They'd get put on hacked disks and we'd get sack loads of fan mail from all over Europe. We couldn't believe it.

Did the demo scene help you when you were making commercial games?
DS: Definitely. And vice versa. A game would take months to write so you'd put something you'd done [for the game] in a demo, which would take a day or so to do. They definitely fed each other.

In the late Eighties, you produced a trio of games for Mastertronic, including an impressive conversion of coin-op *Gaplus*.
AR: Working on a big Namco game was a buzz but that game was a technical challenge. We had to turn sprites into characters with a raster split at the bottom [of the screen] so you could scroll character with your ship, while we were seamlessly scrolling the stars in the background. No one sent us any assets, we just played it and made notes.
DS: Binary Design up in Manchester had the contract but some programmers they had working on it had completely messed up. We went up to see them, which was a big trip for us, and we told how we were going to tackle it. They sent us the arcade machine which took up half of my bedroom.

You were still very much bedroom coders, then!
AR: It definitely wasn't a nine-to-five job. We had no social life. We were obsessed with making games and demos and that was all we did from waking up at about midday and going back to sleep at 3am.
DS: We might pop to Sainsbury's for supplies, and we'd watch Neighbours at lunchtime!

In 1990 you handled two more arcade conversions, *Hot Rod* and *Dragon Breed*, for Activision, a major international publisher. Did you feel more pressure than when you were writing budget games?
DS: It felt like we were in the big league. Full-price games, proper boxes, proper marketing, adverts in mags.
AR: It was a two-way thing. We were still coding directly on the C64, using an Expert cartridge and saving to disk, and it could take over 20 minutes to assemble the code. Activision changed that for us. We asked for the Programmers Development System, which was a professional setup with a 286 PC and hard drive. They cost £2,500 and we asked for one each!

And you managed to fit them into your bedroom?
DS: No, when we started on *Hot Rod*, we moved into an office. Well, it was a room at the top of my dad's antique shop in Eastbourne. They sent us the arcade machine and there was no way we were getting that up three flights of stairs so it stayed in the shop. We would come down, play it, go up and carry on programming.
AR: Our mates would come round and play it. We still had the *Gaplus* machine from two years before. They wouldn't come and take it away because of the shipping costs. We should have started our own arcade.

Did they send you the *Dragon Breed* coin-op, too?
AR: Yes but it was in a suitcase! We got sent this metal suitcase, really heavy and expensive looking, and you

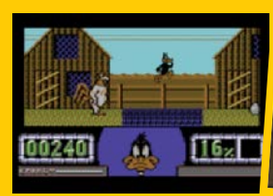
FIVE TO PLAY

The definitive games of the dynamic duo

GAPLUS 1988
■ If you want an example of Ash and Dave's technical nous, see this admirable conversion of Namco's *Galaga* sequel. A key element of the game involves you hoovering up enemy ships and harnessing their firepower, a real challenge for the sprite-based hardware, but they implement it impressively.

KAMIKAZE 1990
■ Though clearly inspired by the coin-op *Sky Kid*, this entertaining scrolling shooter has some sweet touches of its own. We especially like the crash-landings and the resolute manner in which your foolhardy pilot strides to his plane before looping and gunning his way through a flotilla of foes.

SLICKS 1992
■ Ash and Dave had already handled a conversion of Sega's racer *Hot Rod* and went on to produce an excellent Game Gear port of *Micro Machines* but this is all their own work and a very fine effort indeed. *Zzap!64* issue 89 gave it an excellent review and pieced together a handy track map, too.



DAFFY DUCK 1993
■ Having produced a string of polished platform-puzzlers based on cartoon characters, this was to be their best yet. Though complete, it was sadly never released as publishers Hi-Tec crashed but thanks to the unwavering efforts of Frank Gasking, you can now play it if you visit gtw64.co.uk.

DOWNFORCE 2002
■ This decent racer, which mixed Formula One mechanics with more playful arcade sensibilities, proved to be the final game to feature both Ash and Dave in the credits, receiving only a limited release when developer Titus went bust. Let's hope we see the boys team up again one day.

opened it up and there were joysticks and buttons in there along with the board. *Dragon Breed* was the first game where we got assets from the original arcade guys but they were just printouts. We had to copy everything by hand.

As you were working together closely, did you ever fall out?
DS: Oh there were disagreements [between the two of us] but it was always about work and they weren't serious.
AR: Sometimes our comments were quite vicious but Dave, you honestly never upset me.
DS: We were both striving for the same thing so the arguments were just about how to get there.
AR: We were both very aware that it didn't feel like a job. We were getting paid to do what we loved.

How did you divide up the work? Did you both have specific roles?
AR: We could both code and I could do art. At school I did technical drawing, art and maths so I always had that mix. Dave would do the game code while I did all the graphics and I'd often have some time spare so I think every third game, I'd do the main game code.
DS: I think that's where some of the games came from, like *Dynamix*, with you starting them while I finished coding bits of a main game we were doing. It worked well and there was never a point where we hadn't got anything to do. And Ash always had this incredible eye for detail. I still see it in the games he makes now.

In the early Nineties, you entered a relationship with publishers Hi-Tec. How did that come about?
AR: We knew David Palmer, who set-up Hi-Tec, because he used to be at Alternative Software and they had published our first game. He was a nice guy. Our usual thing was to do a game and then send it out and see who wanted it…and who would pay us the most!
DS: We were still freelance so each game was its own contract but David started paying us a retainer each month. It became an ongoing thing. They'd tell us what licence they wanted to use. Hi-Tec had a deal with Warner to use their characters and Hanna-Barbera [characters] too. David said, 'We've got as many game licences as you want to make!'

How exactly do you go about making a game based on *Scooby-Doo* or *Bugs Bunny*?
AR: Some already existed on other platforms and they had a designer called Dave Thompson, who would send us game design stuff.
DS: I know we got folders straight from Hanna-Barbera with loads of concept art. We could use that to capture the characters correctly.

We really liked *Jonny Quest*, with its large flick-screen map, crawling with wildlife.
DS: That was one we designed! We used this three-in-one editor which we must credit Tony Crowther for. He was one of our heroes. It was a dream to use. You could use it to design sprites, create characters and put together maps. We lived off that!

***Poseidon* was a similar game but was not as well received, scoring only 51% in *Your Commodore*. Did you give much attention to review scores?**
DS: It mattered if it was a game we were proud of, like *Gaplus*, *Kamikaze*, *Hot Rod*… if you got a bad

SELECTED TIMELINE

ASH AND DAVE
- **Pirates in Hyperspace** [C64] 1987
- **Alloyrun** [C64] 1988
- **Gaplus** [C64] 1988
- **Dynamix** [C64] 1989
- **Supernudge 2000** [C64] 1989
- **Kamikaze** [C64] 1990
- **Hot Rod** [C64] 1990
- **Dragon Breed** [C64] 1990
- **Wacky Darts** [C64] 1990
- **Poseidon** [C64] 1990
- **Jonny Quest** [C64] 1991
- **Augie Doggie** [C64] 1991
- **Scooby & Scrappy Doo** [C64] 1991
- **Insektor Hecti** [C64] 1991
- **Robin Hood: Legend Quest** [C64] 1992
- **Super Seymour** [C64] 1992
- **Mean Machines** [C64] 1992
- **Yogi Bear** [C64] 1992
- **Slicks** [C64] 1992
- **Bugs Bunny** [C64] 1993
- **Daffy Duck** [C64] 1993 (released 2015)
- **Micro Machines** [GameGear] 1994
- **Sink or Swim** [GameGear] 1994
- **Pete Sampras Tennis** [GameGear] 1994
- **Micro Machines II** [GameGear] 1995
- **Breakpoint** [Playstation] 1996
- **Tennis Arena** [Playstation] 1997
- **360 Three Sixty** [Playstation] 1998
- **All Star Tennis** [Playstation] 1999
- **Roadsters** [Playstation] 2000
- **Downforce** [PS2] 2002

ASHLEY ROUTLEDGE (SELECTED)
- **Littlest Pet Shop** [DS/Wii] 2008
- **Jambo Safari** [DS/Wii] 2009
- **Deadball Specialist** [iOS] 2010
- **Zombie Flick** [iOS] 2010
- **Flick Golf** [iOS/Android] 2011
- **Agent Dash** [iOS/Android] 2012
- **Sugar Rush** [iOS/Android] 2013
- **Flick Soccer Brazil** [iOS/Android] 2014
- **Flick Gold 3D** [3DS] 2015
- **Blocky Raider** [iOS/Android] 2015
- **Flick Field Goal 16** [iOS/Android] 2016
- **Blocky Soccer** [iOS/Android] 2016

» [C64] *Dragon Breed* was one of a pair of high profile conversions the boys handled for Activision.

> Making demos was a way to express yourself, like an artist. We loved thinking of things no one had done before Dave Saunders

YOU ASK THE QUESTIONS

The C64 duo on your questions

MAYHEM: Was *Kamikaze* anything to do with Namco's coin-op *Sky Kid*?

We did say we went up the arcades a lot, so yeah we were fans of *Sky Kid* but legally, no, it was all our own idea!

TAPMANTWO: The majority of your C64 games were budget releases. Did it feel as though your work was undervalued?

Sometimes. When we worked on a full-price game it felt better. Some of the budget stuff, like *Gaplus* and *Slicks*, we're really proud of though.

NORTHWAY: How come you gave the 16-bit computers a wide berth?

We were just into the C64. I don't know if it was a scary thought to move on to something new and start again. I remember meeting up with Ian and Mick, who we knew from the Compunet demo scene, and they tried to get us to move to the Amiga but we just never got into it.

MERMAN: What hardware did you use for sampling sounds on the C64?

Some bit of official Commodore hardware we plugged in and Ash wrote this software called the 'Super Flipping Fast Sound Sampler'. It was all about changing the volume setting to make these very slight clicks. You stuff your sample back through the volume and it produces your sound.

TT: Have you ever been confused with Chas & Dave?

It's come up a few times but as jokes. I think. Are they still alive?

> "If we could still be making Commodore 64 games, we would be" Ashley Routledge

mark for something you were proud of, you would be gutted.

AR: We'd spend hours in WHSmith looking through every magazine to see if there was even just a mention of a game we'd made. I've still got all the cuttings in a folder! There were some we knew weren't our greatest and I think *Poseidon* was one of them. Though the sound effects were good. I'd just written our own editor and it produced some pretty unusual stuff…

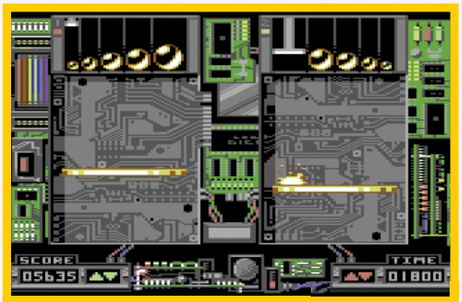
You also produced a *Daffy Duck* game that was never released due to Hi-Tec going bust.

AR: It was heartbreaking but it was kind of softened by it being reviewed first and they were great reviews. That was what we craved – praise! You just wanted the recognition. *Daffy Duck* was a big game for us and it had taken months. The *Zzap!* review [which gave it 94%] was important to us.

DS: Maybe if we'd been on royalties it would've been different but we were always paid up front. Get it out there, get a review and say, 'Yup, did a good job there!'

Did the money matter at all?

DS: Well, we didn't make that much. We got between £5,000 and £10,000 for most of our C64 games, though I think for *Dragon Breed* we got almost £20K. We didn't have flash cars, though. You'd see Archer Maclean and The Bitmap Brothers making it rich. We didn't have glamorous lives like that!



» [C64] Dynamix was an interesting and original title that involved high-speed ball balancing.

AR: We had been stereotypical bedroom coders. That had started to change when we moved out of home in 1990 and were living in a flat together with some friends. That's when stuff like the girlfriends and drinking started to creep in. We had enough to have a nice life but we weren't rich.

You were very prolific and also made a number of games for Codemasters around this time. Given the company published games by the Oliver Twins and was run by the Darling brothers, we wondered if you fitted right in, being a pair yourself?

AR: Well, I ended up marrying into the family…

Sorry, what?

AR: That was much later, but yeah: I'm married to Liz, sister of Richard and David Darling.

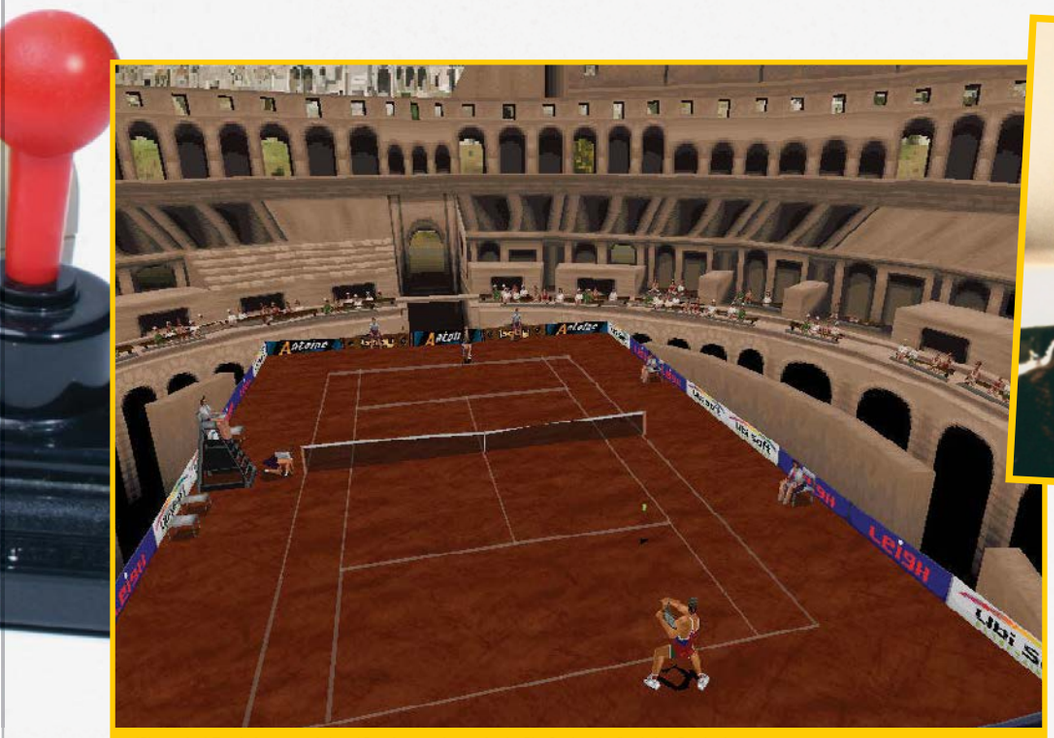
Crikey, Ash.

AR: What Codemasters were doing at that point was gathering together people they liked, who'd done games they liked over the years. We'd sent them stuff in the past and they were keen to get us to join them.

You worked on both *Micro Machines* and *Slicks* for Codemasters. Which of these overhead racers came first?

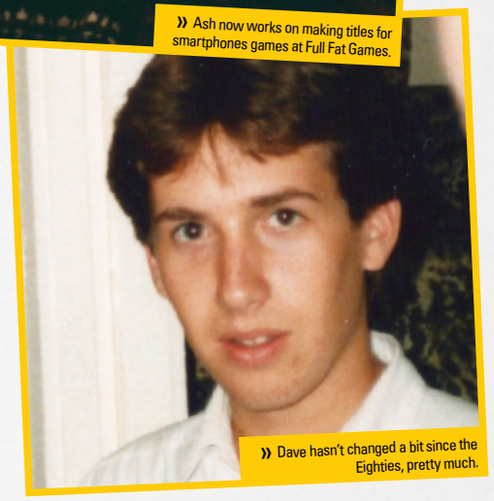
DS: Slicks came first and that was us. We were really proud of that one. We'd also wanted to make a racing game and were really into Formula One. Those were the days of Mansell and Senna. The glory days!

AR: We had this idea of, 'What if you could win without winning the race.' What if you had a rival in the race and you beat them… we started playing with that idea. We made it entirely ourselves and hadn't heard of *Micro Machines*. There was no connection at all. We were 100 per cent C64 and hadn't embraced the consoles at all.



» [Playstation] *Tennis Arena* was Ash and Dave's second game for the PlayStation, the first being *Breakpoint*.

» Ash now works on making titles for smartphones games at Full Fat Games.



» Dave hasn't changed a bit since the Eighties, pretty much.

DS: We didn't even go on to the Amiga! We just wanted to keep pushing the 64.

You stuck with the Commodore 64 until very late into its life. Was that loyalty or stupidity?
DS: A bit of both!
AR: No, I don't think it's either [all laugh]. We just loved it. If we could still be making Commodore 64 games, we would be. We did it until it was literally not viable, business-wise.
DS: If we'd been thinking of our careers, we would've gone on to the Amiga but we stuck with the 64 and then jumped to the Game Gear.

Was developing for Sega's handheld a big step-up?
DS: It uses the same 6502 processor [as the C64] so it turned out it wasn't a big jump. Maybe we had been scared of moving on to something new and then along came the Master System and the Game Gear and it was like, 'Hold on, this is almost the same!'
AR: It was still a huge decision for us because it coincided with us leaving Eastbourne and moving to Codemasters in Warwickshire. This was console development and you needed development kits to actually produce the games.
DS: This was when Codemasters was actually reverse engineering the consoles. The manuals we had to program the machines had massive gaps. They were still working things out…

You did an excellent job converting *Micro Machines* to the Game Gear. Did you get much help?
AR: The NES version existed and was a great success and a Mega Drive version was being developed in tandem so we had access to that. There was a lot of messing about and overdrawing to get it working on a smaller system with less memory. We liked the drifting of the cars and boats in the NES version and merged that with the graphics and structure of the Mega Drive version. It ended up getting the highest rating of all the conversions. One gave us 98%!

You left Codemasters in the mid-Nineties and seem to have found a niche making tennis games.
DS: It was all Pete Sampras' fault! Codemasters was getting into sports star licences like *Brian Lara* and they gave us Pete. We did the Game Gear version and then our producer at Codemasters, Dave Thompson, tempted us to leave and join his new company, Smartdog. He rented this office in a posh manor house in Warwick.
AR: It was like a castle! You'd have CEOs landing helicopters on the lawn every day.
DS: Our first game was *Breakpoint* for the PlayStation, programmed in C, which we had to learn. Sony put my code through this analysing software and it was so badly written, it was embarrassing. But it worked!
AR: *Tennis Arena* was our best tennis game. Ubisoft gave us complete freedom to do what we liked and we'd got bored of doing realistic tennis games, so we went for *Street Fighter*-style characters and special moves mixed with tennis.
DS: That's exactly what tennis needs [all laugh]. It was also the first time we used motion capture and we got to direct this professional tennis player, Chris Bailey. Man, he hit that ball hard. It was scary. You know when a ball is served at you at 100 miles an hour.

Your final games were both racers, *Roadsters* for the PlayStation and *Downforce* for the PS2.
DS: For *Roadsters*, we moved into a big office over two floors. I was technical director, Ash was the art director and it all got a lot more serious. We had to go to meetings and stuff like that.
AR: You had to work proper hours and the team had to be there at the same time. It became a grown-up job at that point.

Is that why you left the industry?
DS: Not at all. I'm very proud of *Downforce* and it's a decent game but Titus had bought Smartdog and then they got in trouble and went bust. Game over. There were probably 30 people, including me and Ash, all out of a job. It was devastating.

Dave, you left the industry behind and now run your own online business balloonmonkey.co.uk. Could you ever see yourself making games again?
DS: I don't know if I've still got the technical skills [for games] but in terms of the passion and that creativity when you're all working together for an end product, I definitely miss that.

Ash, you are still in the industry as Creative Director at Full Fat Games and have overseen a huge range of mobile games released over the last eight years there. Do you miss having Dave around as your coding partner?
AR: Well, that had already happened. The days when it was just us making games ended around the PlayStation. Games became more involved and you had to specialise and needed so many more people. You had to grow up. But those C64 days were the best years, when we were in charge of making everything.
DS: It was hard when we started having a boss.
AR: It still is for me! ★

Thanks to Frank Gasking at gtw64.co.uk for the introduction and Martyn for additional help.

SCORE-003340

Magical Hat No Buttobi Turbo! Daibouken

RECAP ATTACK

» MEGA DRIVE » VIC TOKAI » 1990

I have incredibly fond memories of playing *Psycho Fox* on Game Gear, via the Master System converter, on many a camping trip or long journey as a kid, so naturally the other works of Vic Tokai also resonate with me – let's be honest, they're all basically the same game. I never knew about *Kid Kool* at the time (nor would I have had any way to play it even if I had) but *Decap Attack*'s instantly-familiar gameplay hooked me straight away.

In later life, I would discover that *Decap Attack* was actually a heavily-altered version of a Japanese game with an even stranger name, something we know as *Magical Flying Hat Turbo Adventure*. The more colourful cartoon-style graphics were much more in line with my fond memories of *Psycho Fox* and, even though I had no real knowledge of the *Magical Hat* anime (like many over here, hence the game's radical makeover), I quickly grew to prefer it to any of Vic Tokai's other games.

It's not without its faults, mind – single-hit deaths can often feel cheap (which was addressed in the western game with collectable life containers), some of the jumps are obscenely tough and the soundtrack pales in comparison to that of *Decap Attack*, plus losing your always-handy chuckable companion, Robogg, at a tough checkpoint could make for an uphill struggle.

Still, history tells us that most of the best platform games are joyous, colourful and expressive. And in that regard, *Magical Hat* is the best game from its stable. ✱

RETRORATED

>> This month we play through a wonderful new Kirby game, discover the history of the Amiga in the latest From Bedrooms To Billions documentary and get our fight on with Guilty Gear Xrd – Revelator-

[3DS] Kirby's poison ability allows him to spit icky globs at enemies and race along on a deadly poisonous wave.

Kirby: Planet Robobot

HAL LABORATORY'S NEW GAME MECHS A GREAT IMPRESSION

INFORMATION

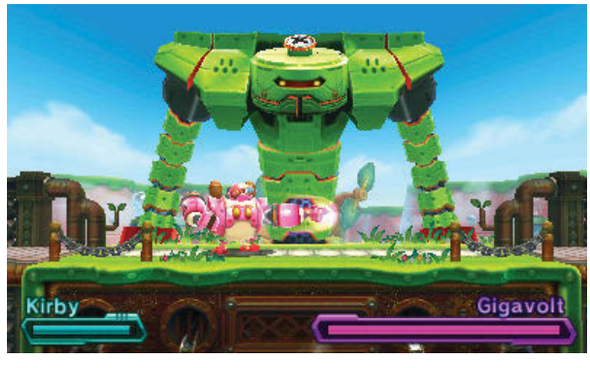
- **FEATURED SYSTEM:** 3DS
- **ALSO AVAILABLE ON:** N/A
- **RELEASED:** OUT NOW
- **PRICE:** £34.99
- **PUBLISHER:** NINTENDO
- **DEVELOPER:** HAL LABORATORY
- **PLAYERS:** 1-4

After being rather disappointed by Kirby's Wii U outing we met *Planet Robobot* with more than a hint of trepidation. Would we end up with a pretty game with convoluted controls, or something more befitting the popular pink hero? Fortunately, Hal Laboratory has returned to familiar ground, ignoring the stylus-based gameplay that made *Kirby And The Rainbow Paintbrush* so dull to play, and in doing so have delivered one of the best *Kirby* games of recent years.

While it takes much of its inspiration from *Kirby: Triple Deluxe*, *Planet Robobot* adds plenty of fresh ideas of its own. Gameplay is very similar to *Triple Deluxe* meaning most of the levels take place on a foreground and background plane, with Kirby flipping between them to complete goals. Everything feels far more deliberate this time around, though, with Hal Laboratory putting plenty of thought into each stage's design. Flipping between planes is incredibly fluid, and there are plenty of hidden goodies to find, too, ensuring that you'll always be investigating each stage to the best of Kirby's abilities.

The 3D in *Planet Robobot* is effectively used in these sections too, with many hazards cleverly coming out of the screen as they attempt to trap Kirby on his quest. With so many companies dialling back the use of 3D in the system's more recent games, it's great to see it being used so well here. Unless you're prone to headaches, you're unlikely to reach for the 3D slider at any time, it's that effective.

Of course, we've been privy to the neat 3D and clever stage switching in *Triple Deluxe*, so while everything is

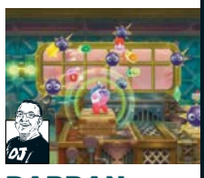


» [3DS] The bosses in *Planet Robobot* are great fun, and often feature surprisingly complex attack patterns.

BRIEF HISTORY

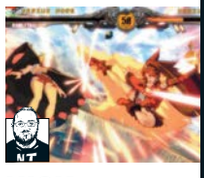
» Kirby first came to life in 1992, when he appeared in the charming *Kirby's Dream Land* for Nintendo's Game Boy. It wasn't until the release of *Kirby's Adventure* on the NES in 1993 that he received his famous 'Copy' ability, however. While he's appeared in many platformers since, he's also tried his hand at various spinoff games, too, and has even appeared in the long-running *Smash Bros.* series.

✱ PICKS OF THE MONTH



DARRAN

Kirby: Planet Robobot
What with this and *Fire Emblem: Fates*, the 3DS has been on a roll. A solid, highly-entertaining game.



NICK

Guilty Gear Xrd -Revelator-
Not only is it astonishing to look at, it's got amazingly creative characters and it's still as over-the-top as ever. Another round? Let's rock!

JUST A SCORE
GIVE YOUR SCORES · FOLLOW OUR SCORES
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» [3DS] Those ice creams fall down, temporarily obscuring your view.

more polished, it's not bringing anything new to the table, meaning it's surely like any other *Kirby* platformer? Well no, actually, and it's mainly due to the inclusion of a ridiculous power suit that Kirby can climb into on most stages. The Robobot Armor is a genuinely great new addition to Kirby's arsenal and allows him to interact with his world in a way not previously seen in earlier *Kirby* games. Your newfound strength allows you to pick up and move blocks, destroy certain objects, manipulate screws, which in turn manipulate the landscape, among other things. It's even possible to 'copy' enemies by scanning them, which gives you bonuses and can even change your form into a car or jet. The car sections take the form of simple race tracks where you must flip between planes to avoid obstacles, while the superior jet sections are solid shoot-'em-ups, with decent enemy waves and some tough bosses.

Although Kirby's mechanical suit receives plenty of screen time, this is still a traditional *Kirby* game and there are plenty of baddies to suck up so their abilities can be employed by the cute pink puffball. In total, 27 different abilities are available, including three new forms, one of which pays tribute to *Earthbound*'s Ness. The Robobot Armor has a further 13, meaning there's plenty of experimenting to do during play. Certain Amiibos can also be used too in order to receive new forms, but they add very little to the game, being mainly variants of existing abilities.

Another new addition to *Planet Robobot* is the cubes that must be collected on each stage. Three are found on each level and some of them are exceptionally well hidden. In addition to opening secret levels (once a set number have been collected) they're also needed to unlock the doors to the bosses found at the end of each world.

While we're on the subject of bosses, let's just highlight their incredibly high standard and the huge step-up they represent over those found in many other *Kirby* games. They're not overly tough (it's a kid's game, after all) but they all feature solid, inventive attack patterns that constantly play with the 3D perspective and will always have you on your toes. The mid-level mayors can be taken down quickly if you have the right ability, but the main end-of-stage goons will give you a good run for your money and won't go down without a fight. Again, there are elements similar to the adversaries seen in *Triple Deluxe*, but everything now feels more assured and engaging, as if Hal Laboratory has bottled the lightning that was hinted at in *Triple Deluxe*. Even the story, which sees Kirby's planet being taken over by an evil (yet cute) corporation so it can be turned into a mechanical nirvana, is fun.

And fun sums up *Planet Robobot* the best. It's a wonderfully jolly romp that not only features some of the best level design we've ever seen in a *Kirby* game, but proves that even the oldest of franchises can be taken in fresh and exciting directions with a little bit of thought and care. Add in a huge number of stickers to collect, which can be used to enhance Kirby's new metal suit, and three excellent mini-games and *Planet Robobot* becomes one of the best *Kirby* games we've played for absolutely ages. Highly recommended. ✱

In a nutshell

A brilliant platformer with inventive boss fights, excellent level design and clever use of 3D. A good example that the oldest franchises can be treated in fresh new ways.

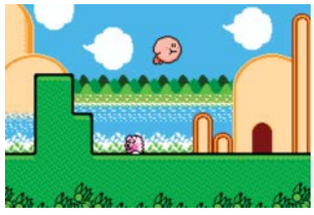
8

RetroGamer_Mag scored **8** for Kirby: Planet Robobot

Follow our scores on JUST A SCORE

✱WHY NOT TRY

▼ SOMETHING OLD
KIRBY'S ADVENTURE (NES)



▼ SOMETHING NEW
KIRBY'S EPIC YARN (WII)

RETROROUND-UP

>> Every month we look at all the classics and latest releases that are available to buy or download

From Bedrooms To Billions: The Amiga Years

» **Publisher:** Gracious Films » **Cost:** £3.99 Rent, £10.54 Stream and Download

We're not big fans of the 'talking heads' documentary approach. It makes for some dull viewing at times and is fully reliant on those doing the talking and sharing their anecdotes. *The last From Bedrooms To Billions* suffered from it, and at times this one does too.

The Amiga Years has a trump card, however, the wonderful RJ Mical, whose passion, bubbly personality and sheer love of the Amiga spills from the screen every time he makes an appearance. He's not alone either. Many of the people who made the Amiga sing share that same affection for the massively popular 16-bit home computer and it makes for essential viewing if you ever grew up with the machine.

It is a known story however and as with the original *From Bedrooms To Billions*, there is a lot here that the average retro gamer will already know. That doesn't make it any less interesting, but it gives *The Amiga Years* an air of over familiarity that can sometimes make its running time seem overly long. *The Amiga Years* is disjointed, too. While it focuses (understandably) on the creation of the Amiga, much of what came after, the games, prolific publishers and developers, the later systems, is rushed. There's a heavy US-centric approach too, which is great to ensure the film reaches the widest possible audience, but won't necessarily strike a chord with many UK viewers.

Despite the bias and the lack of delving in to the many games that made the Amiga such an essential piece of kit, *The Amiga Years* is still an entertaining watch. The historical footage is astonishingly good at times, offering great insight into what was happening at the time, while there's a string of varied (if incredibly short) extras that cover everything from the *Turrican II* soundtrack to the release of the *Batman Amiga Pack*. Ultimately, *The Amiga Years* is an entertaining, albeit rather uneven look at one of the most beloved computers of the 16-bit generation.

PICK OF THE MONTH

» If only all the interviewees were as animated and as excited as RJ Mical.

» Prominent coders such as Éric Chahi discuss the strengths of Commodore's 16-bit system.

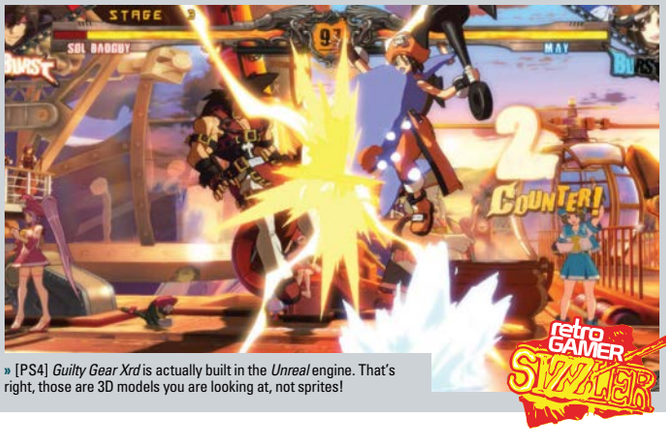
» Dave Needle passed away earlier this year, making his sections particularly poignant.

Guilty Gear Xrd -Revelator-

» **System:** PS4 (version tested), PS3 » **Buy it for:** £49.99 / £29.99
» **Buy it from:** PlayStation Store, retail

With 18 years of experience under its belt, *Guilty Gear* is now a veteran fighter – but it's never looked better. A remarkable cel-shading engine means that the characters actually look like sprites during gameplay, and have a high-quality anime look in cutscenes. Fans of the series will relish the usual brilliantly hyperactive fighting action, and practice missions reinforce the comprehensive tutorial provided for new players. The amazingly creative cast of characters includes newcomer Jack-O and two returning fighters, the pirate Johnny and combat chef Jam. You might want to think twice about it if you already own *Guilty Gear Xrd -Sign-* or if you're mostly into single-player, as you'll only have the RPG-esque MOM Mode to play after finishing Episode Mode, but for all other 2D fighting fans it's a must.

9 RetroGamer_Mag scored **9** for Guilty Gear Xrd -Revelator-
Follow our scores on JUST A SCORE



» [PS4] *Guilty Gear Xrd* is actually built in the *Unreal* engine. That's right, those are 3D models you are looking at, not sprites!

Mighty No. 9

» **System:** PS4 (version tested), PS3, Xbox One, Wii U, PC » **Buy it for:** £15.99
» **Buy it from:** PlayStation Store, Xbox Live, Nintendo eShop, Steam, retail

Keiji Inafune's attempt at making a spiritual successor to *Mega Man* hasn't quite panned out as hoped, but it's no disaster. In many respects, it plays similarly to the classic Capcom platform shooting series, with similar controls and level designs, as well as the ability to choose to tackle stages in any order and gain boss powers. A new dash mechanic allows you to absorb defeated enemies to chain combos, which adds an interesting new twist to the formula. However, the old irritations are still there, including instant death traps and an uneven difficulty level – some stages are a breeze while others are sadistic in the extreme, and the dash can sometimes be abused to skip tough sections. The low-budget look of the game won't win new players over, either.

6 RetroGamer_Mag scored **6** for Mighty No. 9
Follow our scores on JUST A SCORE

» [PS4] Many have bashed *Mighty No. 9*, but there are some genuinely good ideas hidden in there.

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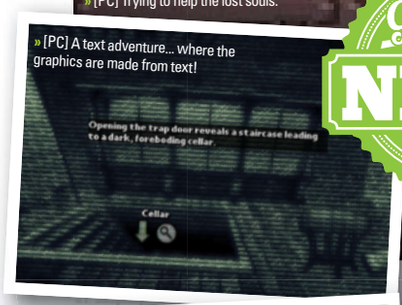
Gamers HOMEBREW

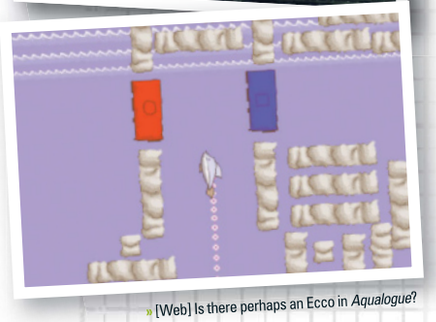
Brewing since 2005

» [PC] Trying to help the lost souls.

Gaming NEWS



» [PC] A text adventure... where the graphics are made from text!



» [Web] Is there perhaps an Ecco in *Aqualogue*?

REALLY WILD THINGS

The rules to Game Jolt's Adventure Jam 2016 were pretty simple: developers were given two weeks to create a game that would "tell some form of story, explore a character, or have some sort of adventure", and that left the field very open indeed, meaning that there's far more than just text or point-and-click games amongst the entries.

As you'd possibly expect there are RPG-style outings such as *A Traveler's Walk*, the trials and tribulations of a young man called Calvin in *BeastyWings* or *My Girlfriend From Another Dimension*, the story of a rabbit called Starlene and Ginger, a Shiba Inu. There are some point-and-click adventures as well; titles like *Esther And The Fallen Star* or *Share This With Your Friends* – which also explores how social media interaction within games can feel forced – look and sound fantastic, but we were particularly taken with *Dead Man's Crossing* which is the tale of the spectral engineer aboard an almost literal ghost train in the Wild West who must help his passengers to complete their final journey.

The deliberately vague rules mean that there's also room in the competition for an *Ecco The Dolphin*-style affair called *Aqualogue*, while *For No Apparent Reason* offers up some crime solving, and there is even slightly surreal blasting action from *Pasta Aliens* or *Pine Tree Awareness Month*, only one of which has a name describing what it's actually about! As is often the case with these competitions, some of the entries are more experimental like *Memoriae*, which is described by its creator as being like an interactive novel.

There are quite a few clever titles in there too, like the point-and-click title *Text Adventure* where all of the in-game graphics are made up from descriptive text or the homage to point-and-click games designed by Sierra On-Line's Roberta Williams called *Stair Quest*, where a search for the *Orb Of The Stars* requires a surprising amount of climbing! And let's not forget *No Spoilers In Title Adventure* even if we can't really say much about what happens in it...

There are 165 entries waiting for you behind Kikstart.eu/adventure-jam-2016 at the jam's page over at Game Jolt, so a little delving around should find something to suit most tastes. Please note, though, that there are some themes and occasionally coarse language within the entries which some readers will find offensive.

NEW GAMES NEEDED

If you have a homebrew project you would like to see featured then please contact us at: **retrogamer@imagine-publishing.co.uk**

» [Amstrad CPC] Reading is always a good idea!

```
you're in the city library
you see an old BOOK
you can go:  north
now what? take book
taken.
now what? examine book
it looks ages old
now what? read book
HI! This is the designer of this game.
Welcome to my city, which happens to be
the hiding place of the wizard's first
piece!
If you find it, leave the city with it
to win. Don't fail me and good luck!
now what? ■
```

IT'S ALL GREEK

SceptreQuest 1 was to be the first chapter in a series of seven games from author Sean Givan which eventually didn't materialise. But his original BASIC listing is available to download from IFArchive.org, so CPC Wiki forumite SRS has taken that program and converted it to the run on the Amstrad CPC.

Kikstart.eu/sceptre-cpc goes to the forum thread where the conversion can be downloaded – SRS says in his post that the playing time, admittedly, isn't particularly long but there are still a few puzzles to solve and nasty deaths to avoid.

"The spinach-guzzling hero must perform tasks set by his girlfriend"

» [ZX Spectrum] He lives in a caravan, apparently?

THE SAILOR MAN

Developer Gabriele Amore has recently been busily converting the platform-based action of *Popeye* from the arcade to his trusty Spectrum; as with the original, the spinach-guzzling hero must perform tasks set by his girlfriend, Olive Oyl, while avoiding the less amorous advances of various enemies including his long-standing rival Bluto.

The controls feel a little different to the other recent port of this game, for the VIC-20, but they don't take long to acclimatise to. For a downloadable image and more information, there's a World Of Spectrum thread behind Kikstart.eu/popeye-spec.

HOMEBREW HEROES

Mariuszw recently took isometric 3D game Pentagram on the Spectrum and, with some persuasion, got it working on the Atari 8-bit – we were wondering how he achieved this translation…

» [Atari 8-bit] Well well well... what do we have here?

To begin with, why did you decide to port *Pentagram*?
The idea I started with was to find out efficient way to port a game from ZX Spectrum to Atari 8-bit. Such ports were done before (the excellent port of *Deathchase* for example), but, according to its author, it was done with rewriting all the code line-by-line from Z80 to 6502. I felt this could be done better, with computer assistance. I needed a game which could still look well on Atari – so no colour map – and had its code available. I found *Pentagram*'s listing on a Filmation website, and that code is very elegant and well structured, so it was easy to understand and then port. Then I finally played the game and found it very enjoyable. Also, we already had *Knight Lore* and *Alien 8* ported from BBC, so we could complete the series of Filmation games on the Atari.

What processes are involved with porting from the Spectrum to Atari 8-bit?
First of all, you need a listing of a Spectrum game. With *Pentagram* I used an already prepared listing. Then you need to convert Z80 to the equivalent 6502 code. Doing that manually is possible, but very time consuming and error-prone. During development I prepared a compiler, which took Z80 code as input and produced 6502 code as output. The resulting code was not perfect or optimal, but at least it was almost working. It required some manual intervention, but my compiler tool assisted me with spotting the places which required further analysis. The next stage was debugging the running code on Atari – not an easy task, if you have code without comments and you have no idea what each piece of the code is supposed to do. Here I developed another tool, which ran Z80 code and 6502 code side-by-side, checking memory addresses read and written by both versions. With that tool, it was very easy to find bugs and fix them. The final stage was to get game running fast enough – here Altirra, with its advanced profiler, was extremely handy.

What has the response from the Atari 8-bit community been like?
Response was great, people really like the game and how well it worked on Atari. Also, the release of source code was appreciated in the community. Moreover, I was very surprised that a C64 coder actually took the code and made it run on C64 and there was also great response from C64 community – I guess because everybody was thinking until now that C64 can't do isometric games, while now it looks that C64 can do them, when 6502 is properly programmed.

THE BIG INTERVIEW · MARIUSZW ·

» [Atari 8-bit] Really getting to the point.

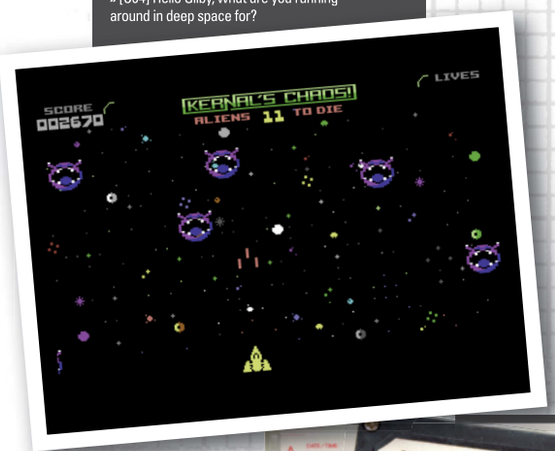
DO YOU REMEMBER?

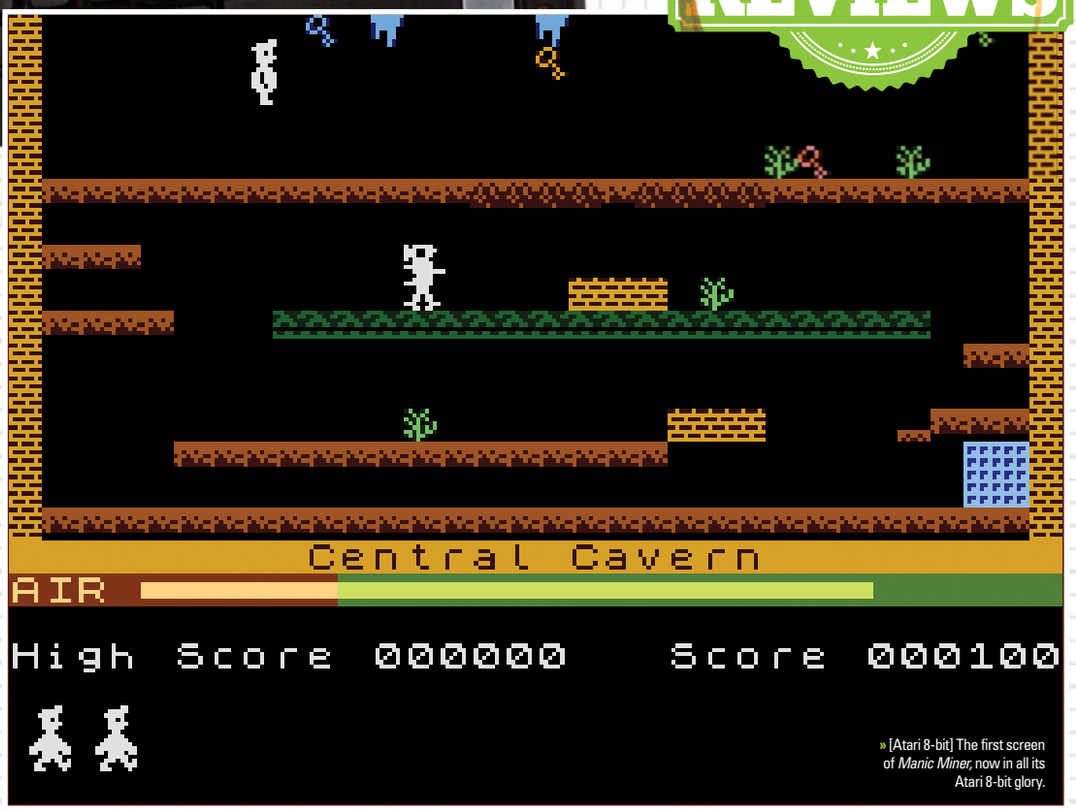
Kernal's Chaos on the C64 was released in 1987 by Mike 'Kernal' Berry and is a gallery shooter. Enemies drift across the screen and the player unleashes electric death upwards while trying to avoid a collision. That makes it sound very simple indeed, in part because that's what it is, but at the same time it's surprisingly addictive.

Shooting a quota of enemies will change how they look and, since the sprites are 'borrowed' from other C64 titles, there's a spot-the-sprite 'meta game' in there too; some are taken from *Morpheus*, *Thing Bounces Back* and *Wizball* but there's plenty more to recognise. While it might not appear to be strategic, the seemingly-random enemy motion can be learnt and the delay between shots means that they require careful placing.

» [C64] The sacred enemies of *Antiriad* seem to have got themselves lost.

» [C64] Hello Gilby, what are you running around in deep space for?

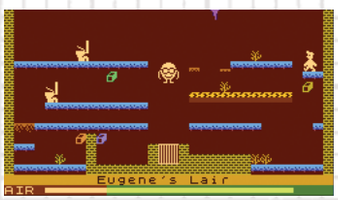




» [Atari 8-bit] The first screen of *Manic Miner*, now in all its Atari 8-bit glory.

MANIC MINER

» **FORMAT:** ATARI 8-BIT » **DEVELOPER:** TEZZ » **DOWNLOAD:** KIKSTART.EU/MANIC-MINER-A8 » **PRICE:** FREE



» [Atari 8-bit] Spending time with Eugene.

» [Atari 8-bit] They say never meet your heroes…

» [Atari 8-bit] Digging around in The Vat to find a couple of keys.

The life of a prospector is a hard one and Surbiton wouldn't be considered the obvious first port of call either, so Miner Willy wasn't having much luck until he accidentally stumbled upon all that remains of a once great, technologically advanced society. On the plus side there's a stockpile of goodies located in the subterranean caverns, but the people who left those riches behind also abandoned their high-tech mining equipment and getting past that and some of the strange creatures which have taken up residence will be difficult. It certainly doesn't make things easier that falling too far will kill Willy outright or that his supply of air is limited.

Along with patrolling and static hazards, each cavern has a number of artefacts to collect and finding the optimal route to gather them up before heading to the exit is something of a puzzle; the time limits are generous, but many of the objects have been placed so that the player ends up in harm's way while trying to collect them!

Willy's adventures shouldn't need much of an introduction for most **Retro Gamer** readers, but his only official outing on the Atari 8-bit was a below-par conversion of *Jet Set Willy* released by Tynesoft in 1986. Some nine years ago there was a second version of the game released which was rewritten based on the Spectrum original but still featuring the Rob Hubbard Atari 8-bit exclusive soundtrack and this superior effort was seen by many fans to be righting that wrong.

Manic Miner is a similarly solid addition to the system's software library with the difficulty of the original surviving the journey between platforms intact and a great deal of work having very been put into dragging colour out of the Atari 8-bit's usually monochromatic highest resolution mode. The pixel-perfect jumping required to complete the game won't suit everybody, but those who are fans of the should find this entertaining.

8 RetroGamer_Mag scored **8** for Manic Miner

Follow our scores on JUST A SCORE

SOKOBAN

» **FORMAT:** ATARI ST » **PRICE:** FREE
» **DEVELOPER:** PETER LANE
» **DOWNLOAD:** KIKSTART.EU/SOKOBAN-ST

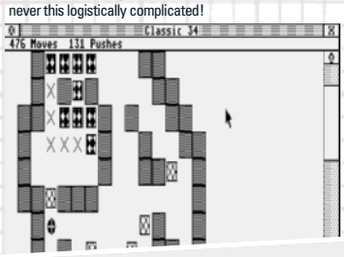
There are many clones of the warehouse-based puzzler *Sokoban* around, but this one is unusual because it's designed to run on the Atari ST's GEM desktop. The objective is to shove the crates around your warehouse until they cover the marked out areas. It's a simple sounding task but a potentially challenging one, too: since there's no way to pull the boxes, one mistake can leave something in an unrecoverable position or blocking an aisle.

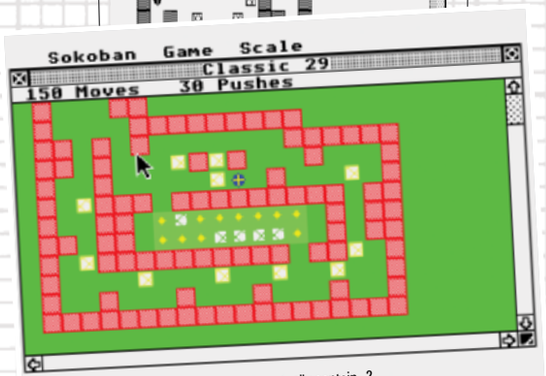
The in-game movement could have been much more refined, but the user interface is reasonable and the game runs in whichever desktop resolution is in use, offering three scaling options for the play area so it can be adjusted to taste. There are 50 challenging levels included and the option to load more, meaning lots of crate-pushing puzzles to solve and then re-examine to see where the number of moves or pushes used can possibly be reduced.

7 RetroGamer_Mag scored **7** for Sokoban

Follow our scores on JUST A SCORE

» [Atari ST] Working in a real warehouse was never this logistically complicated!





» [Atari ST] So what do all of these crates actually contain...?

PENTAGRAM

» **FORMAT:** ATARI 8-BIT » **DEVELOPER:** MARIUSZW
» **DOWNLOAD:** KIKSTART.EU/PENTAGRAM-A8 » **PRICE:** FREE

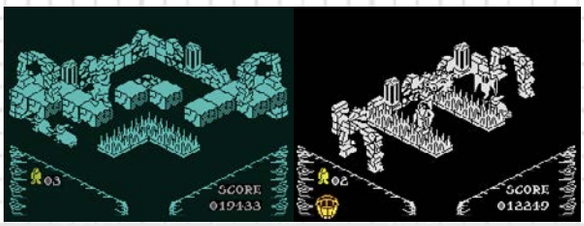
The serial adventurer Sabreman's fourth outing on the Spectrum was spent in search of an illusive Pentagram and, although the location is long forgotten, the last remaining copy of the Grand Arch Wizardry Spell Book at least offers some hints, so our intrepid hero has taken possession of said tome along with some fetching robes.

The task faced in this faithful conversion to the Atari 8-bit of Ultimate's game isn't an easy one because the various parts of the Pentagram are scattered around the large, isometric 3D map with a large number of static hazards and roaming nasties to worry about, many of which materialise after Sabreman enters a room. This is a tough as-nails game that really pushes the -reflexes and occasionally challenges the sanity, but in a way that makes it very much beloved by Spectrum fans; now the Atarians can share that joy and indeed pain!

8 RetroGamer_Mag scored **8** for Pentagon

Follow our scores on JUST A SCORE

» [Atari 8-bit] If the creatures don't get Sabreman, the spikes will.



ROUNDUP

We've looked at the new Atari 8-bit version of *Pentagram* from Mariuszw this issue, but one unexpected fruit of his hard work and generous releasing of the source code was a second conversion of the game on the C64. Kikstart.eu/pentagram-c64 goes to version 1.1 – there was a bug in the original release which has been fixed – uploaded by the surprisingly anonymous developer, Emu.

Kikstart.eu/magical-tower-mv-spec goes to the World Of Spectrum forum thread started by developer Timmy for his new release *Magical Tower Adventure – Mini Version*. There are treasures to collect along with colour-coded keys which open doors, allowing passage further into the tower. The lurking horrors must be defeated and just touching one starts a fight, with both sides duking it out until one dies as their health is depleted.

JEWEL WAREHOUSE

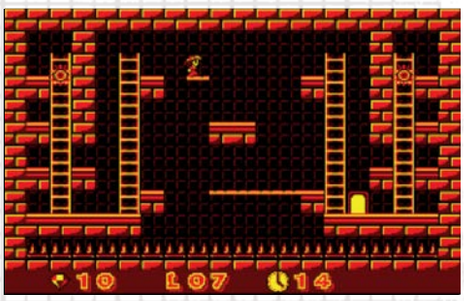
» **FORMAT:** AMSTRAD CPC » **DEVELOPER:** EGOTRIP » **DOWNLOAD:** KIKSTART.EU/WAREHOUSE-CPC » **PRICE:** FREE

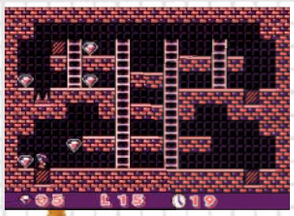
The Cyborg Queen's arrival is imminent and Amy – the heroine of A *Prelude To Chaos,* which we looked at last issue on the Amstrad CPC – needs to retrieve the crystals she's previously collected with some urgency to thwart her highness' invasion plans. The problem is that her warehouse is in a terrible state, with an infestation of strange creatures and a worrying number of fires which will need the attention of an extinguisher.

There are ten jewels to collect on each screen and the game will award an 11th if there's more than ten seconds left on the clock when a stage is completed. The time limits are strict, though, so that'll take some time to achieve. There is an option to select a starting level from the main menu and a continue option to restart the current stage, which make finding the optimal route a little easier.

7 RetroGamer_Mag scored **7** for Jewel Warehouse

Follow our scores on JUST A SCORE





» [Amstrad CPC] This bridge stands no chance of passing a safety inspection!

» [Amstrad CPC] Why would someone fill their warehouse with spike pits?

MAILBAG

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STAR LETTER

REPRINT'S NOT DEAD

As well as playing my retro games, I like to collect them. I am currently buying PSone and PS2 games but lots of older titles were made with very small print runs, making them very expensive to aquire. And there are lots of great titles that were not released in the UK. It made me think, lots of people want to buy these games, so why doesn't someone, somewhere release more physical copies?

Some of these games can be downloaded, but I want a physical disc – and I am sure I am not the only one out there who does. I'm sure there would be a market for reissued original discs, or box sets containing games in a series, or by a specific developer ('Square' Box? Or 'Treasure' Chest, anyone?)

So I had an idea: if publishers won't do it then why don't we do it ourselves, under the **Retro Gamer** banner? Many games publishers are unwilling to take a risk on a new print run, but some sort of crowdfunding preorder service could be used to see what the demand is.

This is an ambitious idea that would require funding and people with specialist knowledge, but one that surely could be possible. Who else would be interested in seeing where this can go?

Robin Tucker

» [PlayStation] Many excellent games are financially out of reach for the majority of players, at least on original hardware.

Reprints are a tantalising prospect, Robin – it'd be amazing to help people experience classics that might be financially out of their reach. But it's a risky business. One US-based company that has arranged such reprints, Game Quest Direct, quoted a figure of roughly $100,000 per game and lengthy negotiations with publishers. To bring previously unreleased titles to the UK would be even harder. We'd have to get the games reprogrammed, tested and certified before release, acting as a full-on publisher. For now we'll stick to what we know, and that's making magazines.

Mega Drive/SNES Book and **The Playstation Book**. I enjoyed them.

On that note, I'd like to ask you if you have any plans to release a Sega Saturn book, in the same vein. I am sure that many others out there would love to see it as well.

Thank you for your time, and keep up the good work!

Pedro Madureira

Hi Pedro, we're glad you enjoy the books. There's no plan to introduce The Sega Saturn Book in the near future, but we do have an upcoming release that may interest you. The Sega Book is currently in production and will be dedicated to the company and its exploits in the home and arcade markets – including the Saturn and some of its games.

DISCUSSED THIS MONTH

Fakémon

We normally ban Nick from drawing, because he is truly awful at it – it's like someone smashed his hands with hammers. However, Drew's challenge to design new Pokémon resulted in two bizarre clock-themed creations, Watchett and Klockout. His infantile sketches were then worked into Actual Proper Art(™) by Jack Fitzpatrick.

PANGTASTIC

Evening **RG**,

It was great to see a new *Pang* game in *Pang Adventures*, though I tend agree with your score of 6/10. I played it on mobile where I suspect it worked a bit better than on console, and I found it to be a lot of fun. What I didn't like is that the controls and movement lacked their usual fluidity, and consequently the gameplay felt rather jerky. Still, I found my rhythm eventually, and unlike you I really enjoyed the boss fights too.

I've always loved the simple mechanics of the *Pang* games, there's something very satisfying about it. My favourite entry in the series was the DS game *Pang: Magical Michael*. I must dig that out again.

In the meantime, have you ever done a feature on the series? (And if not, could you please?!)

Tim Fitches

We're glad to hear that you enjoyed *Pang Adventures* – it's not a bad game, just one that we felt didn't work quite as well as it should. Looking back, we've never actually done a substantial feature on the *Pang* series, or even just the first game on its own. We'll see what we can do to change that!

SATURNDAY NIGHT

Hello there,

First of all, I'd like to congratulate you on your publications, particularly your focused console ones, like **The**

APOCALYPSE SOON?

During my teenage years I received *Apocalypse* for the PlayStation for either my birthday or Christmas, depending on the strength of my memory. I thought it was quite a good third-person game that was in itself a sci-fi action film starring Bruce Willis that never came to be.

» [PS4] We like *Pang* too, and we've featured it in Classic Moments and Minority Report.

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I would like to see a feature on this game in one of your future editions of **Retro Gamer** as this was a good game at the time that combined a bucket load of bullets, gore and a pulsing soundtrack to beat. It was let down at the time when Bruce Willis was no longer committing to the development of the game, hence the fact so many of the pregame scenes reused his one-liners and dialogue.
Cisko Kidd

We've not covered *Apocalypse* before, but it stands out as an oddity – it's a twin-stick shooter from a time when twin-stick shooters hadn't yet been revived for the digital download market. It's not a game that has been part of our immediate plans, but a feature is possible as we've spoken with Neversoft's cofounder Mick West in the past for *Tony Hawk's Pro Skater*.

APOGEE WHIZ

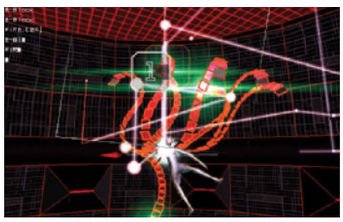
Hello there,
I'm an avid reader of **Retro Gamer** magazine. Would it be possible for you to create an issue with the focus on Apogee Software's games and legacy? I have never seen any UK games magazine write a main feature on this company, the people that created *Crystal Caves* and *Duke Nukem 2* and published *Commander Keen* back in the early Nineties.
I would love to go to my local newsagents sometime and see on the front cover of **Retro Gamer** 'Apogee Software the Pre-*Doom* days' with their logo or one of their characters . This would be an amazing issue in the history of the **Retro Gamer** magazine. I hope you can do this. Thank you for your time.
Ted Hughes

Apogee and its later incarnation as 3D Realms are definitely worthy of coverage in the magazine. We'll see what we can do to make it happen.

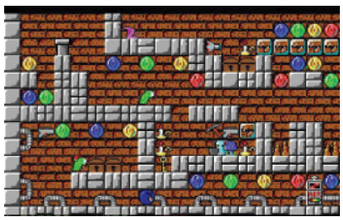
BORN TO BE BAD

Dear **RG**,
I love watching badly acted films with nonsensical plots, like *The Room* and *Troll 2*. Can you recommend any retro games that are unintentionally hilarious in the same fashion?
Kyran York

We're not sure why you'd seek out bad games, but we do know of some unintentionally funny ones. The first one that comes to mind is *The Sniper 2,* an utterly hilarious PS2 game. *Deep Fear* is a *Resident Evil*-alike of questionable quality for the Saturn, which also happens to feature some of the worst voice acting of all time.



» [Dreamcast] *Rez* had a reprint on PS2 in America, but a Dreamcast one might be impossible today…



» [PC] An Apogee feature would be good to see, if only to explain this *Crystal Caves* screenshot…

From the forum

» www.retrogamer.net/forum

Every month, Retro Gamer asks a question on the forum and prints the best replies. This month we wanted to know…

Why do you love the N64?

Antiriad2097
I love the N64 because it made the Playstation look so much better than it already was, and for bringing me the DualShock controller.

theantmeister
I love that Nintendo stuck to cartridges. Would *Ocarina Of Time* have been better with loading times and a fully-voiced Navi?

Bub&Bob
Blast Corps and International *Superstar Soccer 64*, that is all.

Big Shoes
Mario 64, amazing. When I first saw it I was blown away. Four controller ports, best idea ever.

GoldenEye, this was the first time I had serious gaming sessions with friends, many nights playing four-player until the early hours.

Mayhem
Low on quantity, high on quality for the releases. The definitive edition of many franchises were released on the N64. And *GoldenEye*, proving that consoles could do deathmatch FPS as well as PCs at the time.

joefish
Lovely support for four-way multiplayer designed into it from the start.

kiwimike
I adored the N64, with the Expansion Pak for the extra oomph. There's something about cart systems I still prefer aside from instant loading, probably the old fart in me. Had so much fun on this machine with the four controllers for some great multiplayer nights of *Mario* games like *Party/Kart/Golf* and the likes of *GoldenEye*, *Quake 2* and so on.

paranoid marvin
The Trident. Best console controller ever. Also with *Super Mario 64*, the N64 proved that a fully interactive 3D world was possible.

Mayhem
Although it was jarring to go back to subtitles and cartoons in the cut scenes after a couple of years of the PlayStation and Saturn doing FMV stuff, after playing *Shadows Of The Empire*, *Super Mario 64*, *Wave Race*, *Goldeneye* and a whole load more I grew to absolutely love the machine, especially when I replaced the absolutely terrible Pal machine after a year or two!

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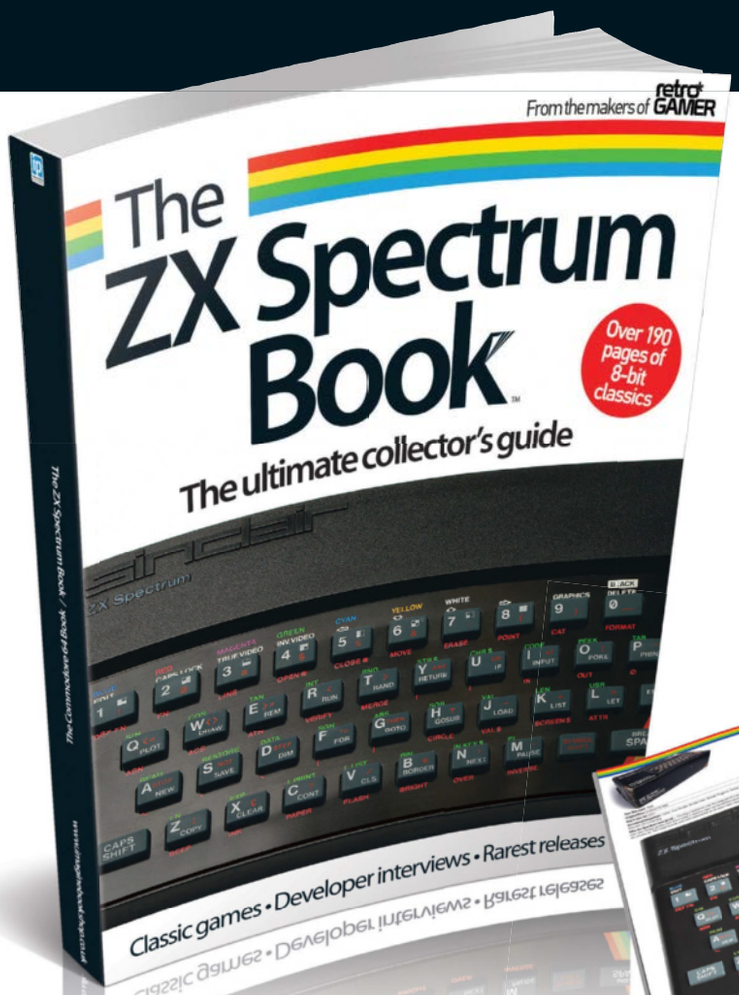
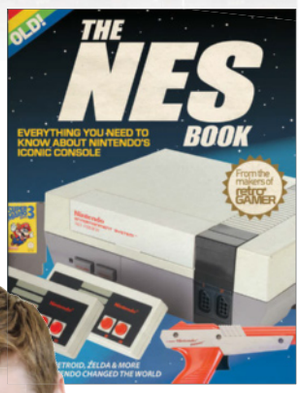

From the makers of retro GAMER
The ZX Spectrum Book
Over 190 pages of 8-bit classics
The ultimate collector's guide
Classic games • Developer interviews • Rarest releases

The ZX Spectrum Book

The ZX Spectrum / Commodore 64 flipper book takes a look back at two of the best-loved home computers of the Eighties, and includes features on the hardware and amazing games, as well as interviews with the people that made them.

Also available...



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As Sonic The Hedgehog turns 25 we look at the many, many anthropomorphic videogame stars he influenced and how they compared next to Sega's Blue Blur

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ENDGAME

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01

» Poor old Axel Sonics has taken a bit of a battering over the course of this game. Final bosses will do that to you anyway, but the poor guy couldn't even use cheats because most websites only list them for the Japanese version.

02

» Luckily, Ruka Hetfield has arrived to save the day! You know her, she's the character that you chose *not* to play as at the start of the game. According to her, she was very worried about you. That's nice of her, isn't it?

03

» Oh, it turns out that she was worried about the treasure. Her partner fighting off all the Pumpkin Heads? No concern. Possible damage to a valuable stone? Frayed nerves. Sod Axel, he's collateral as far as Ruka is concerned.

04

» And why is Ruka so worried? For the most magical reason of all: unbridled personal greed. She wants to sell the Valkiry stone for major cash, and literally snatches it away from Axel to do so, despite the fact that he found it and she didn't do anything to help him.

05

» Ever the sap, Axel gives chase after his beloved Ruka, even calling her "darling" as he does. We'd advise him not to bother – she's clearly going to flounce off with a hedge fund manager when she realises how much less dangerous and more profitable that line of work is.

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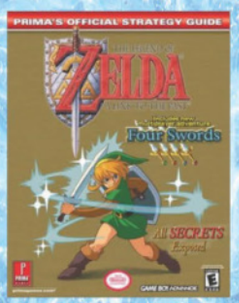

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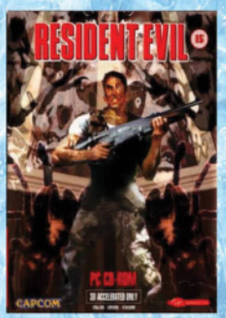

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